

CARNEGIE BEAM SECTIONS

PROFILES AND PROPERTIES



CARNEGIE STEEL COMPANY
PITTSBURGH, PA.

FIRST EDITION

A. I. A. FILE No. 13

1D 91-B2067

CARNEGIE STEEL COMPANY

CARNEGIE BEAM SECTIONS

STATUS OF ROLLS

FOR THE SECTIONS SHOWN IN FIRST EDITION OF
PAMPHLET ENTITLED "CARNEGIE BEAM
SECTIONS, PROFILES AND PROPERTIES,"

DATED JANUARY 1, 1927.

FIRST GROUP—10 SECTIONS.

ROLLS ARE NOW READY FOR THE FOLLOWING 10 SECTIONS,

	SECTION No.	DEPTH	FLANGE WIDTH	
1	CB-103	10"	9"	Constant Depth.
2	CB-104	10"	10"	Constant Depth.
3	CB-105	10"	12"	Constant Depth.
4	CB-126	12"	14"	Constant Depth.
5	CB-127	12"	14"	Constant Depth.
6	CB-122	12"	6 1/2"	
7	CB-142	14"	6 3/4"	
8	CB-146	14"	15"	
9	CB-181	18"	7 1/2"	
10	CB-242	24"	9 3/4"	

CARNEGIE BEAM SECTIONS

SECOND GROUP—13 SECTIONS.

A group of 13 sections has been selected for which roll equipment will be prepared next, as follows:

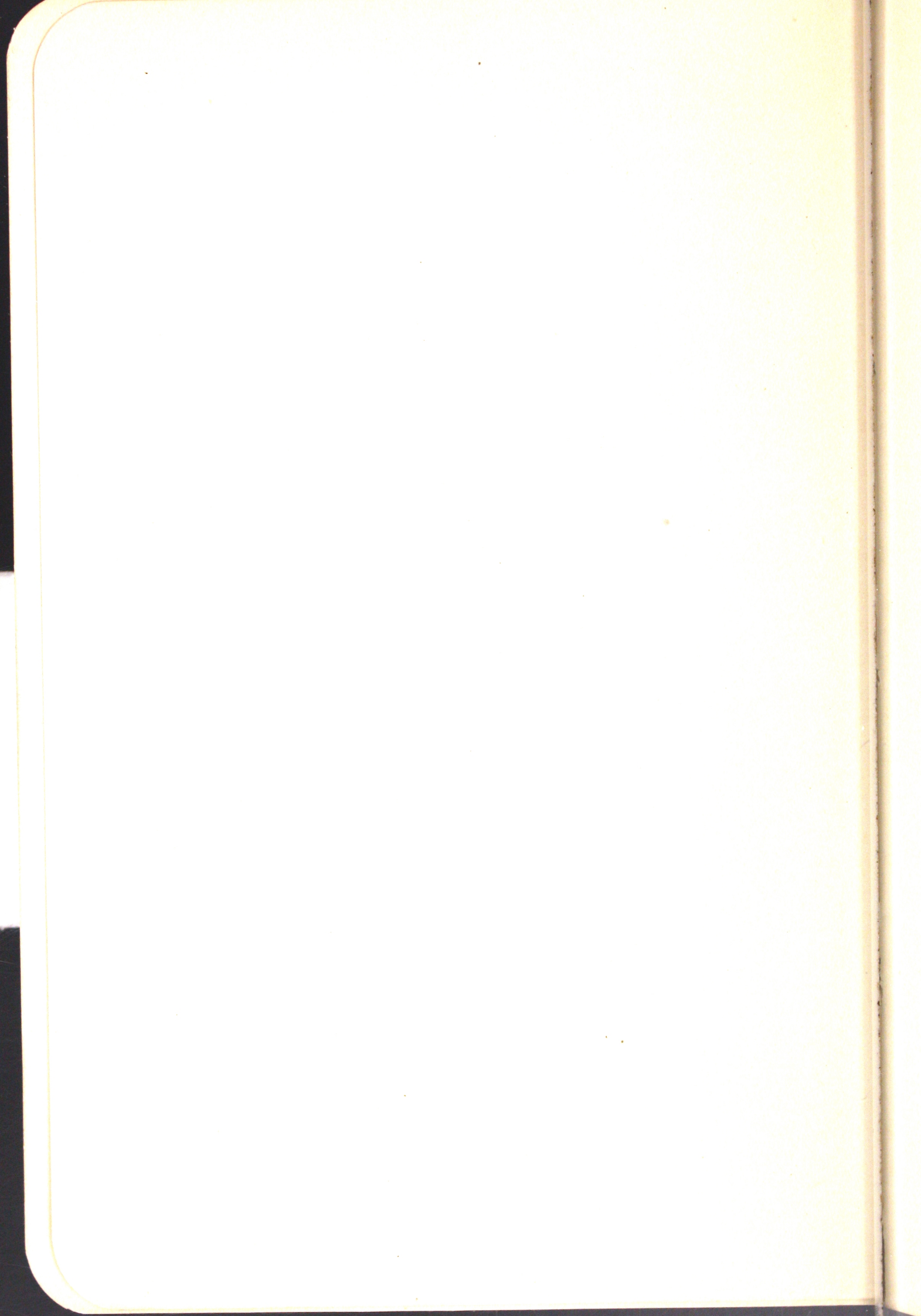
	SECTION No.	DEPTH	FLANGE WIDTH	
11	CB-145	14"	12"	
12	CB-241	24"	8½"	
13	CB-121	12"	6"	
14	CB-141	14"	6"	
15	CB-161	16"	6"	
16	CB-162	16"	7"	
17	CB-124	12"	10"	Constant Depth.
18	CB-125	12"	12"	Constant Depth.
19	CB-211	21"	8"	
20	CB-271	27"	9¾"	
21	CB-301	30"	10½"	
22	CB-101	10"	6"	
23	CB-102	10"	8"	Constant Depth.

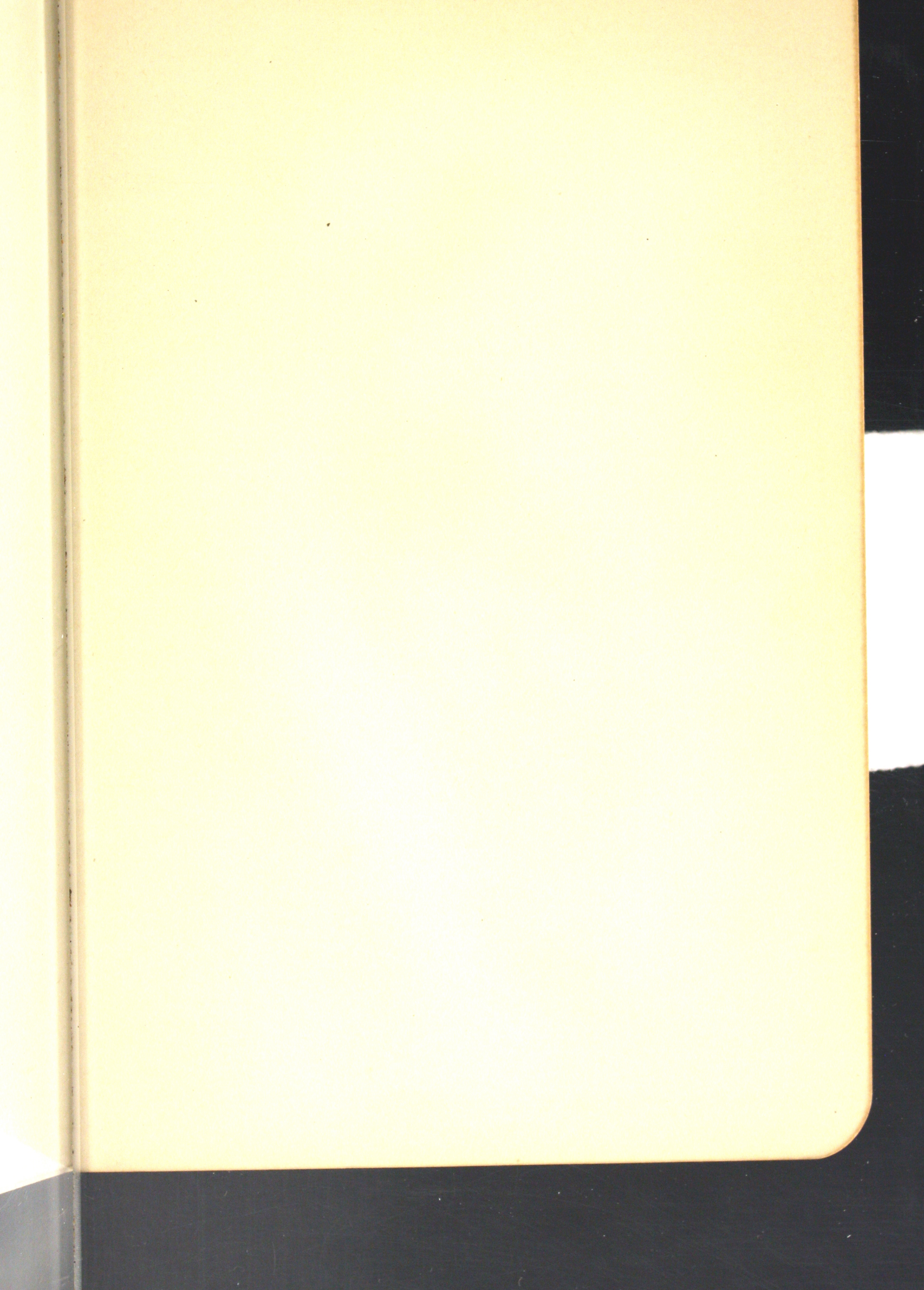
It is proposed to prepare rolls for the above mentioned group of 13 sections substantially in the order named. We hope to be prepared to roll the first of these sections about the middle of March, completing the group about the middle of May.

THIRD GROUP—REMAINING SECTIONS.

With the exception of 8" sections CB-82, CB-83, B-39 and the 9" sections, CB-92, CB-93 and B-40, it is hoped that roll equipment for all of the remaining sections will be ready by the middle of June.

While the designs for the 8" and 9" sections are included in the pamphlet, and are a part of the range of sections, it is proposed to defer preparing for these sections until a later date. In the meantime requirements for an 8" section can be supplied by the use of our present 8" H-beam known as section H-4.





CARNEGIE BEAM SECTIONS

PROFILES AND PROPERTIES
PERTAINING TO A
NEW SERIES
OF
STRUCTURAL STEEL BEAMS
AND
COLUMN SECTIONS

MANUFACTURED BY
CARNEGIE STEEL COMPANY
PITTSBURGH, PA.

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CARNEGIE STEEL COMPANY
Pittsburgh, Pa.

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CARNEGIE BEAM SECTIONS

SINCE the adoption of the present American Standard Beam Sections, in 1896, developments of such magnitude have taken place in the structural steel industry, both at home and abroad, as to demand an improved series of rolled sections suitable for both beam and column purposes.

The series now placed on the market under the name **CARNEGIE BEAM SECTIONS**, provides for this demand by means of a series of shapes combining sound engineering principles with practical improvements. All its sections are produced on a structural mill of the most advanced type.

The series provides a range of rolled steel beam and column sections progressing by regular steps, with contours that will permit sections to be used interchangeably for whichever purpose they are adapted, and in sizes and weights sufficiently varied to meet all ordinary requirements. Their efficiency is high and their component parts are proportioned to permit of ready fabrication.

ADVANTAGES

The advantages characterizing the new series of Carnegie Beam Sections will be explained under the following captions:—

CONTOUR DESIGN
WEB AND FLANGE RATIO
RANGE OF SIZES
PROGRESSIVE BEAM DESIGN
IMPROVED COLUMN DESIGN

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CONTOUR DESIGN

A new form of contour has been adopted whose principal characteristic is the elimination of internal flange slope, the flanges being of uniform thickness throughout their width. This feature increases the strength of the section, permits simpler connections and facilitates fabrication.

Carnegie Beam Sections permit the use of maximum unit stresses in shear and compression for resistance to web buckling and flange crippling, respectively, in conformity with usual building specifications. All fillets, which are parabolic in form, combine maximum spread with minimum area.

WEB AND FLANGE RATIO

In the production of most of the Carnegie Beam Sections a method is used whereby an adequate variety of weights in each group, having substantially equal efficiency per pound, is attained by spreading both horizontal and vertical rolls a proportionate amount. This practice causes the depth of sections to vary somewhat from the nominal, but this variation is kept within limits that will not affect the standardization of details.

A second characteristic, found in the heavier groups of column sections, is an increase in width as compared with depth, combining maximum economy in design of framing and in floor space.

RANGE OF SIZES

Carnegie Beam Sections provide a range of beam and column shapes, from 8 to 30 inches deep and from 5 to 16 inches wide, in weights up to 305 pounds per linear foot, with section moduli about the major axis up to 738 in.³, and with radii of gyration about the minor axis up to 4.14 in.

In general, no sharp line has been drawn between beams, girder beams and columns. The consequent economy in number of sections will insure better deliveries, reduce the number of sizes carried in stock, and allow a greater standardization in shop methods and tools.

Profiles, dimensions and weights are given on pages 8 to 30. Other data pertaining to dimensions and properties are tabulated on pages 32 to 41.

The range of depths in which occurs the greatest normal demand is covered by the adoption of sections 14 and 16 inches deep, affording the designer a better and more economical selection of sections to be used as beams.

CARNEGIE BEAM SECTIONS

PROGRESSIVE BEAM DESIGN

The introduction of the 14 and 16 inch Carnegie Beam Sections gives a progressive series in which each depth is approximately 15 per cent greater than the preceding depth, as shown graphically on range charts on pages 32 and 33. In addition, successive weights in each group are so arranged that their strengths progress by steps having close and approximately regular ratios of increase.

Intermediate groups of heavier sections, of the same depth but with wider flanges and greater strength, are provided for use as beams in structures where it is important to limit the depth of section. These sections are also suitable for columns.

The selectivity of the series for use as beams is indicated graphically in the tables and charts on pages 34 to 37.

Minimum weights of 10-, 12-, 14- and 16-inch sections are offered with a uniform width of 6 inches, which permits a corresponding uniformity in fireproofing and finish.

Very complete groups of sections 24, 27 and 30 inches deep, are provided with flanges 14 inches wide. These will be found convenient for use in structures that cannot be braced laterally and may also be used to advantage where limited clearance is an important factor in design.

Efficient sections, notably 12 inches and deeper, are provided with webs $\frac{3}{8}$ inch in thickness, in order to comply with specifications requiring a minimum thickness of metal.

IMPROVED COLUMN DESIGN

Carnegie Beam Sections include two groups: a **Variable-Depth Type** and a **Constant-Depth Type**. The sections of the latter group are intended primarily for columns, though sections of either type may also be used as beams or girders. In the **Variable-Depth Type** both depth and width increase proportionately as weights increase from the minimum. In the **Constant-Depth Type** the depth does not change, the increase in weights being obtained by thickening the web and widening the flanges. With the heavier groups of both types, high properties about the minor axis are secured by the proportions adopted.

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The **Variable-Depth Type** contains notably sections of the following depth, flange width and weights:—

CB 83 8" x 8" 31 to 90 lbs.

CB 145 14" x 12" 85 to 105 lbs.

CB 146 14" x 15" 115 to 305 lbs.

These sections will be used principally as columns.

In addition, sections 8, 9, 10, 12 and 14 inches deep, are provided having intermediate flange widths which may be used either as beams in shallow floors or as light columns.

The **Constant-Depth Type** is offered in two depths only, 10 and 12 inches, with the following flange widths and weights:—

CB 102 10" x 8" 31 to 42 lbs. CB 124 12" x 10" 75 to 100 lbs.

CB 103 10" x 9" 49 to 63 lbs. CB 125 12" x 12" 110 to 140 lbs.

CB 104 10" x 10" 70 to 92 lbs. CB 126 12" x 14" 150 to 180 lbs.

CB 105 10" x 12" 100 to 140 lbs. CB 127 12" x 14" 190 to 230 lbs.

The 10-inch series will take care of an ordinary 12-story building, while the 12-inch series, in conjunction with the 10-inch series, will take care of an ordinary 18-story building. If desired, the scope of any group can be extended by reinforcement with flange plates.

The **Constant-Depth Type** presents an innovation in rolled steel column sections in that the over-all depth for all sizes of a nominal depth does not vary. The advantages of this feature are reflected in the symmetry of beam and spandrel framework connecting to the columns at a number of successive floors in a steel building, thus effecting a substantial saving in the drafting room, fabricating shop and in the field. The avoidance of fillers under splices on the columns themselves is also advantageous. To the architect and the general contractor constant depth is valuable in that it permits a greater uniformity in fireproofing and finish.

MISCELLANEOUS DATA

All weights per linear foot of Carnegie Beam Sections are expressed in whole pounds. Fillets are included in weights, areas and other properties.

The dimensions to which the rolls for Carnegie Beam Sections are turned extend to three decimal places of an inch, as shown on diagrams on pages 8 to 29, but it will be more convenient for the designer to use the fractions to which they have been rounded in the tables of dimensions of sections on pages 33 to 41.

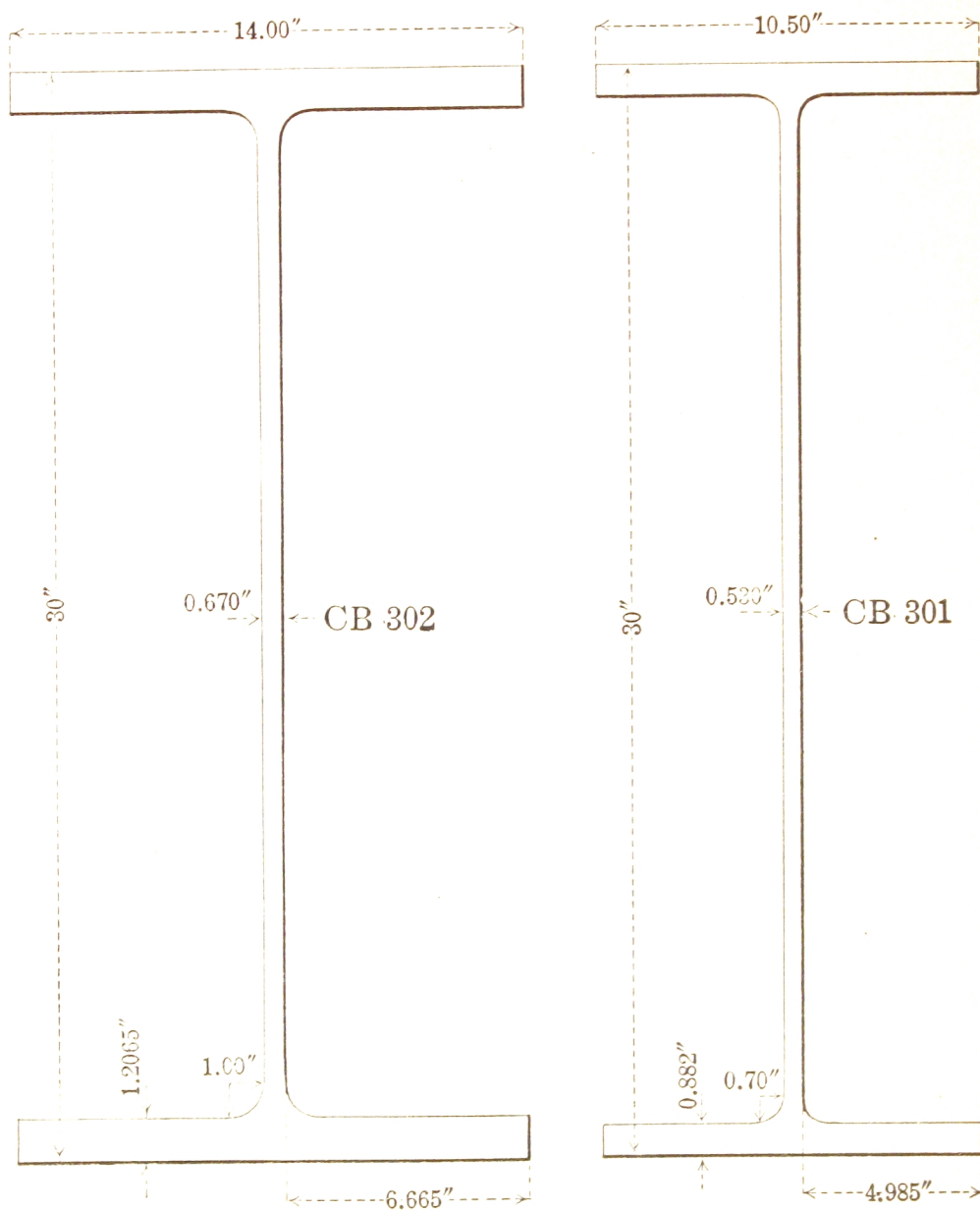
Carnegie Beam Sections will be furnished to the specifications of the Association of American Steel Manufacturers, American Society of Testing Materials or to such other acceptable standard specifications as may be required.

CARNEGIE
BEAM SECTIONS

PROFILES AND DIMENSIONS

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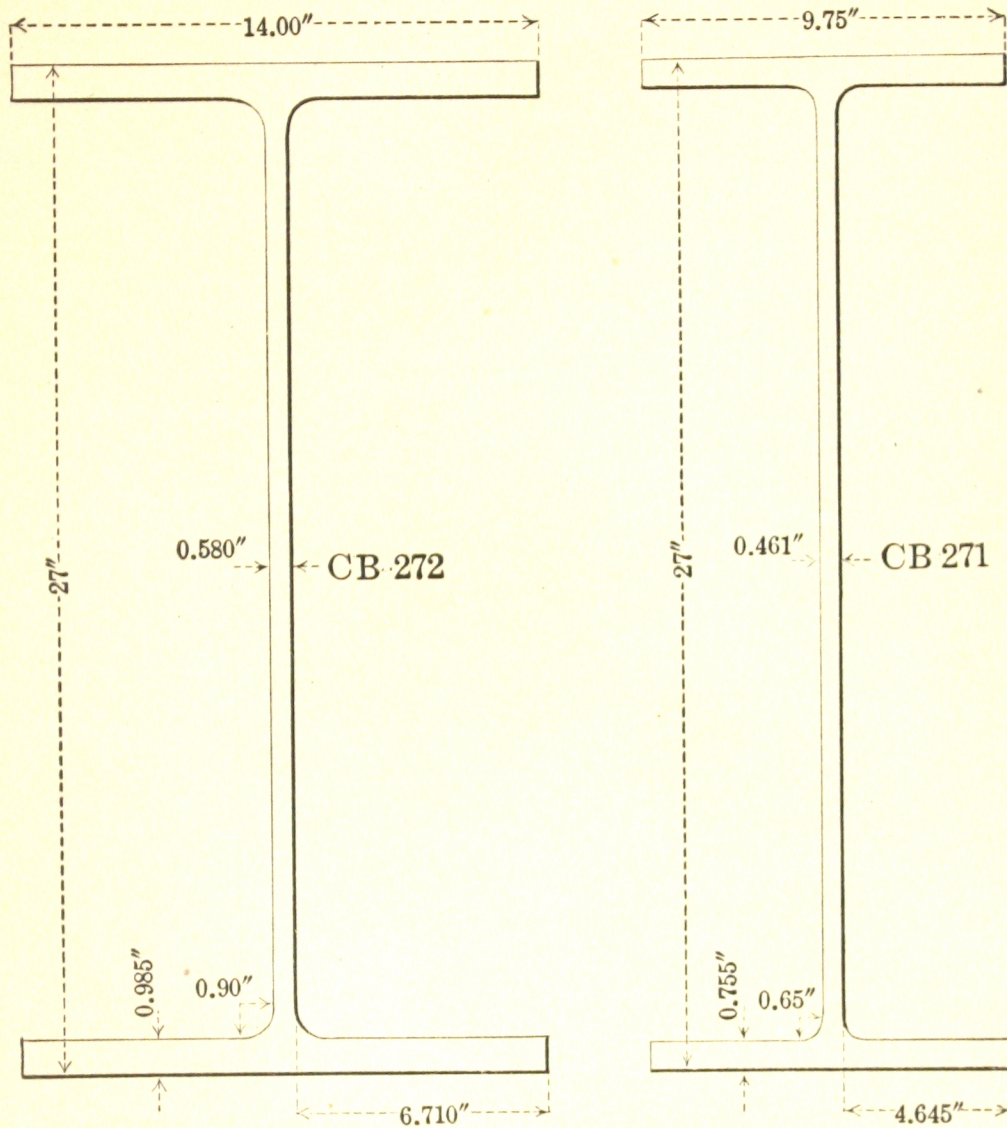
CARNEGIE BEAM SECTIONS



Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
CB 302	30.781	$30\frac{25}{32}$	240	14.218	$14\frac{7}{32}$	1.597	$1\frac{19}{32}$	0.888	$5\frac{7}{64}$
	30.522	$30\frac{33}{64}$	220	14.146	$14\frac{9}{64}$	1.4675	$1\frac{15}{32}$	0.816	$13\frac{1}{6}$
	30.263	$30\frac{17}{64}$	200	14.073	$14\frac{5}{64}$	1.338	$1\frac{11}{32}$	0.743	$\frac{3}{4}$
	30.000	30	180	14.000	14	1.2065	$1\frac{13}{64}$	0.670	$43\frac{5}{64}$
CB 301	30.298	$30\frac{19}{64}$	135	10.591	$10\frac{19}{32}$	1.031	$1\frac{1}{32}$	0.621	$\frac{5}{8}$
	30.148	$30\frac{9}{64}$	125	10.546	$10\frac{35}{64}$	0.956	$\frac{61}{64}$	0.576	$3\frac{7}{64}$
	30.000	30	115	10.500	$10\frac{1}{2}$	0.882	$\frac{7}{8}$	0.530	$1\frac{13}{32}$

CARNEGIE BEAM SECTIONS

CARNEGIE BEAM SECTIONS—Continued



Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
CB 272	27.598	$27\frac{19}{32}$	190	14.176	$14\frac{1}{64}$	1.284	$1\frac{9}{32}$	0.756	$\frac{3}{4}$
	27.400	$27\frac{13}{32}$	175	14.118	$14\frac{1}{8}$	1.185	$1\frac{3}{16}$	0.698	$\frac{45}{64}$
	27.200	$27\frac{13}{64}$	160	14.059	$14\frac{1}{16}$	1.085	$1\frac{5}{64}$	0.639	$\frac{41}{64}$
	27.000	27	145	14.000	14	0.985	$\frac{63}{64}$	0.580	$\frac{37}{64}$
CB 271	27.340	$27\frac{11}{32}$	112	9.855	$9\frac{55}{64}$	0.925	$\frac{59}{64}$	0.566	$\frac{9}{16}$
	27.166	$27\frac{1}{16}$	101	9.799	$9\frac{51}{64}$	0.838	$\frac{27}{32}$	0.510	$\frac{33}{64}$
	27.000	27	91	9.750	$9\frac{3}{4}$	0.755	$\frac{3}{4}$	0.461	$\frac{15}{32}$

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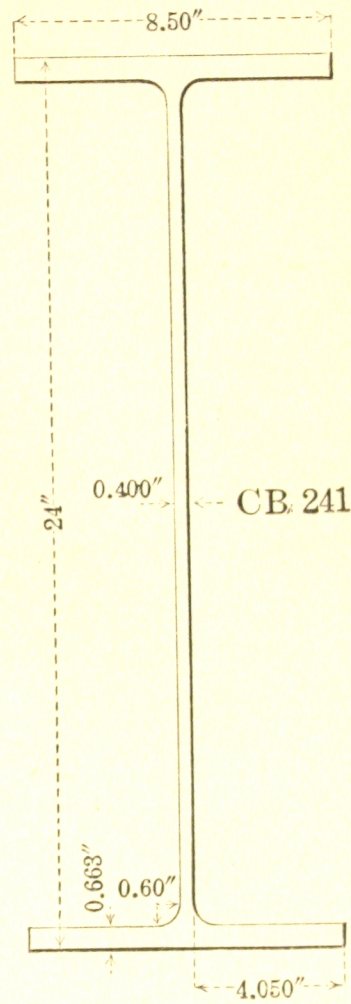
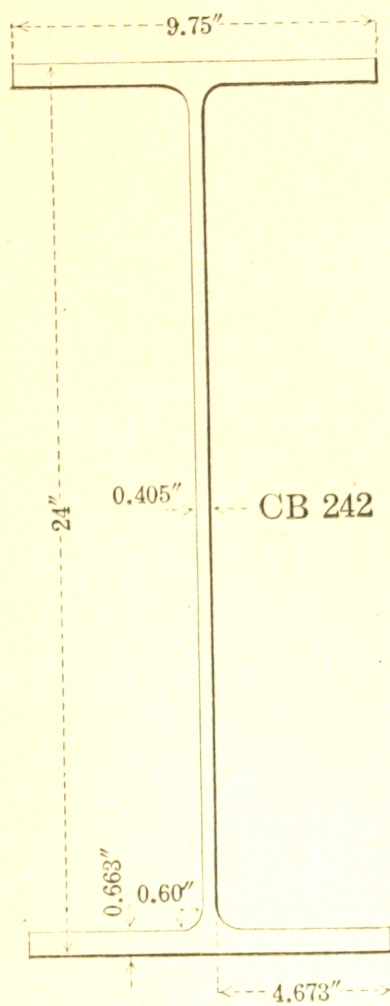
CARNEGIE BEAM SECTIONS—Continued



Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
CB 244	24.664	24 ²¹ / ₃₂	160	14.123	14 ¹ / ₈	1.119	1 ¹ / ₈	0.670	4 ³ / ₆₄
	24.526	24 ¹⁷ / ₃₂	150	14.082	14 ⁵ / ₆₄	1.050	1 ³ / ₆₄	0.629	5 ⁸ / ₆₄
	24.388	24 ²⁵ / ₆₄	140	14.041	14 ³ / ₆₄	0.981	6 ³ / ₆₄	0.588	1 ⁹ / ₃₂
	24.250	24 ¹ / ₄	130	14.000	14	0.912	2 ⁹ / ₃₂	0.547	3 ⁵ / ₆₄
CB 243	24.310	24 ⁵ / ₁₆	120	12.089	12 ³ / ₃₂	0.942	1 ⁵ / ₁₆	0.539	1 ⁷ / ₃₂
	24.156	24 ⁵ / ₃₂	110	12.044	12 ³ / ₆₄	0.865	5 ⁵ / ₆₄	0.494	1 ¹ / ₂
	24.000	24	100	12.000	12	0.787	2 ⁵ / ₃₂	0.450	2 ⁹ / ₆₄

CARNEGIE BEAM SECTIONS

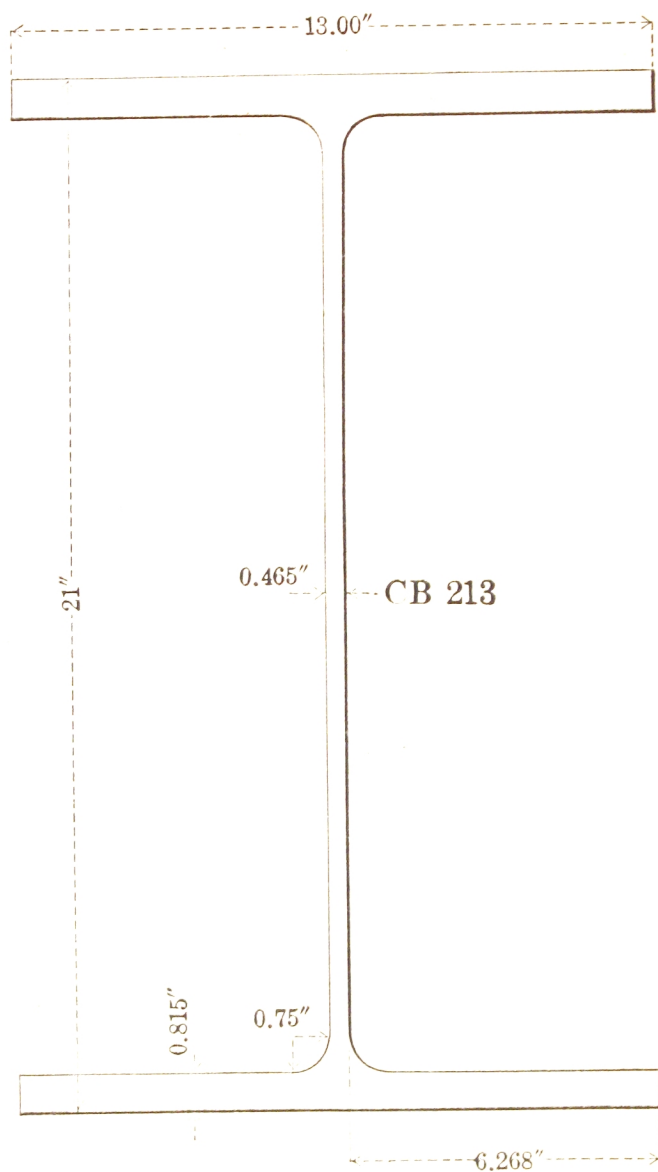
CARNEGIE BEAM SECTIONS—Continued



Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
CB 242	24.308	$24\frac{5}{16}$	94	9.844	$9\frac{27}{32}$	0.817	$1\frac{3}{16}$	0.499	$\frac{1}{2}$
	24.154	$24\frac{5}{32}$	85	9.797	$9\frac{51}{64}$	0.740	$\frac{47}{64}$	0.452	$2\frac{9}{64}$
	24.000	24	76	9.750	$9\frac{3}{4}$	0.663	$2\frac{1}{32}$	0.405	$1\frac{3}{32}$
CB 241	24.000	24	70	8.500	$8\frac{1}{2}$	0.663	$2\frac{1}{32}$	0.400	$1\frac{3}{32}$

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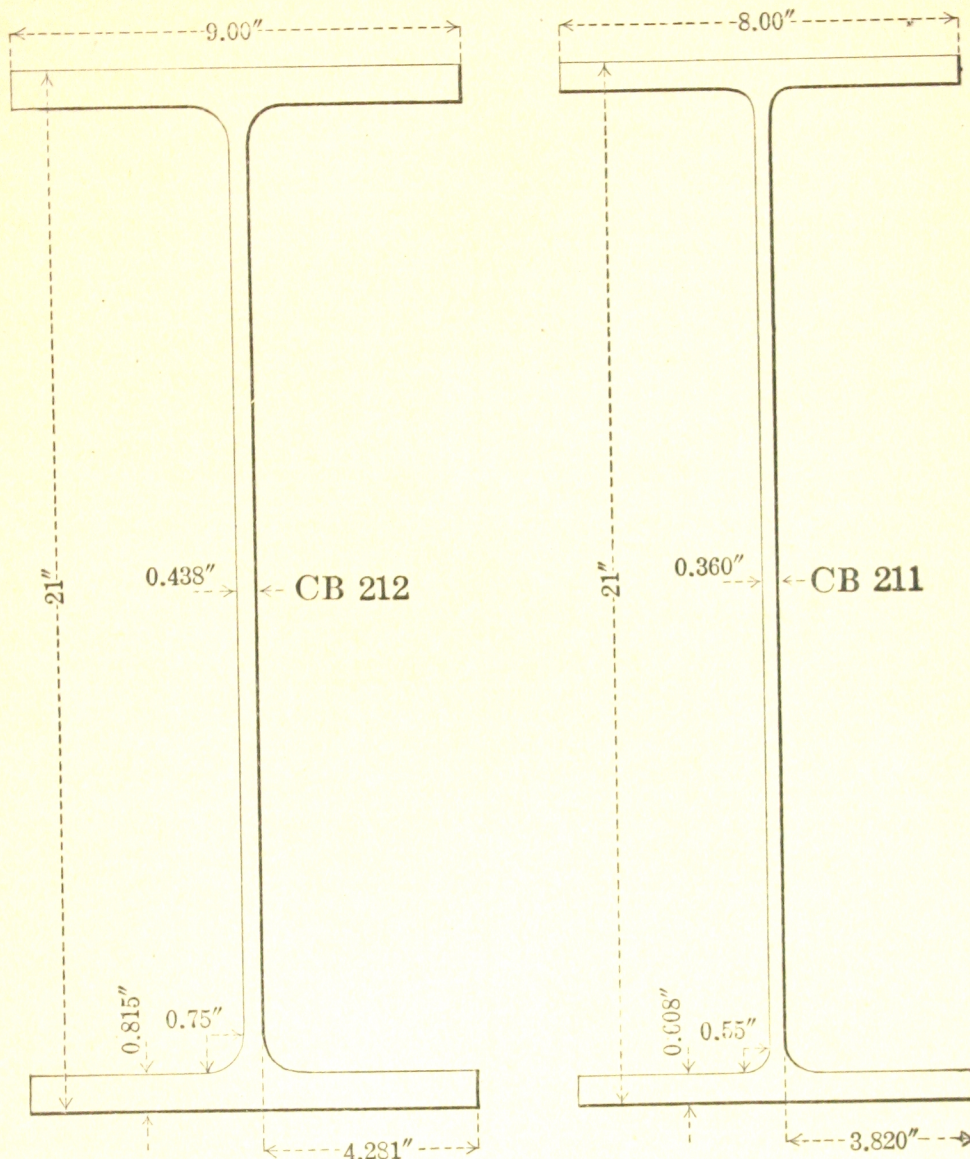
CARNEGIE BEAM SECTIONS—Continued



Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
CB 213	21.248	21 ¹ / ₄	120	13.070	13 ¹ / ₁₆	0.939	¹⁵ / ₁₆	0.535	1 ³ / ₃₂
	21.126	21 ¹ / ₈	112	13.034	13 ¹ / ₃₂	0.878	⁷ / ₈	0.499	¹ / ₂
	21.000	21	104	13.000	13	0.815	1 ³ / ₁₆	0.465	1 ⁵ / ₃₂

CARNEGIE BEAM SECTIONS

CARNEGIE BEAM SECTIONS—Continued

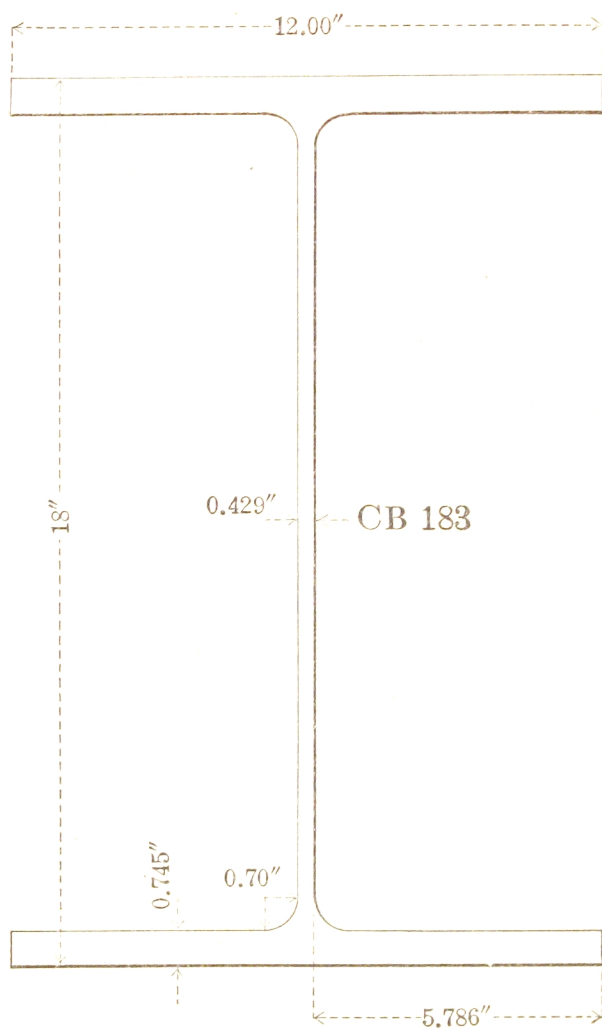


Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
CB 212	21.240	21 ¹⁵ / ₆₄	92	9.064	9 ¹ / ₁₆	0.935	1 ⁵ / ₁₆	0.502	1/2
	21.120	21 ¹ / ₈	86	9.032	9 ¹ / ₃₂	0.875	7/8	0.470	1 ⁵ / ₃₂
	21.000	21	80	9.000	9	0.815	1 ³ / ₁₆	0.438	7/16
CB 211	21.248	21 ¹ / ₄	70	8.073	8 ⁵ / ₆₄	0.732	4 ⁷ / ₆₄	0.433	7/16
	21.126	21 ¹ / ₈	64	8.036	8 ¹ / ₃₂	0.671	4 ³ / ₆₄	0.396	2 ⁵ / ₆₄
	21.000	21	58	8.000	8	0.608	3 ⁹ / ₆₄	0.360	2 ³ / ₆₄
	*21.034	21 ¹ / ₃₂	60	8.015	8 ¹ / ₆₄	0.625	5/8	0.375	3/8

*Special Section Web Thickness 3/8".

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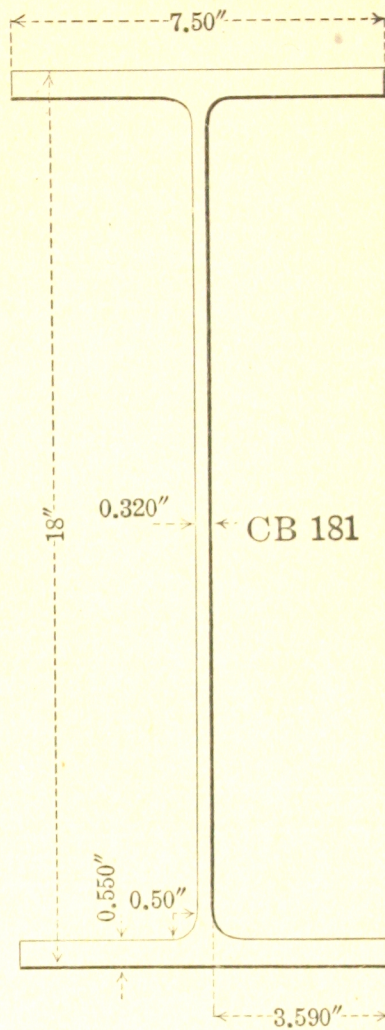
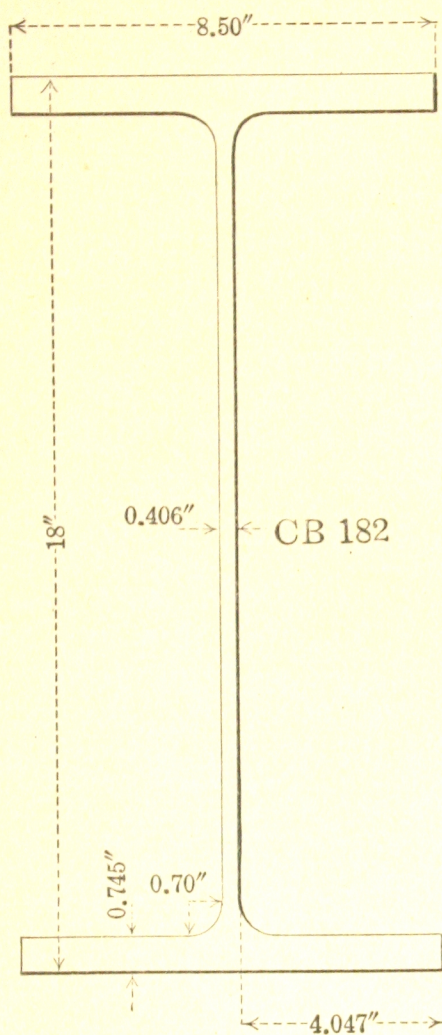
CARNEGIE BEAM SECTIONS—Continued



Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
CB 183	18.238	18 $\frac{15}{64}$	100	12.069	12 $\frac{1}{16}$	0.864	$\frac{55}{64}$	0.498	$\frac{1}{2}$
	18.120	18 $\frac{1}{8}$	93	12.034	12 $\frac{1}{32}$	0.805	$\frac{13}{16}$	0.463	15 $\frac{3}{32}$
	18.000	18	86	12.000	12	0.745	$\frac{3}{4}$	0.429	27 $\frac{3}{64}$

CARNEGIE BEAM SECTIONS

CARNEGIE BEAM SECTIONS—Continued

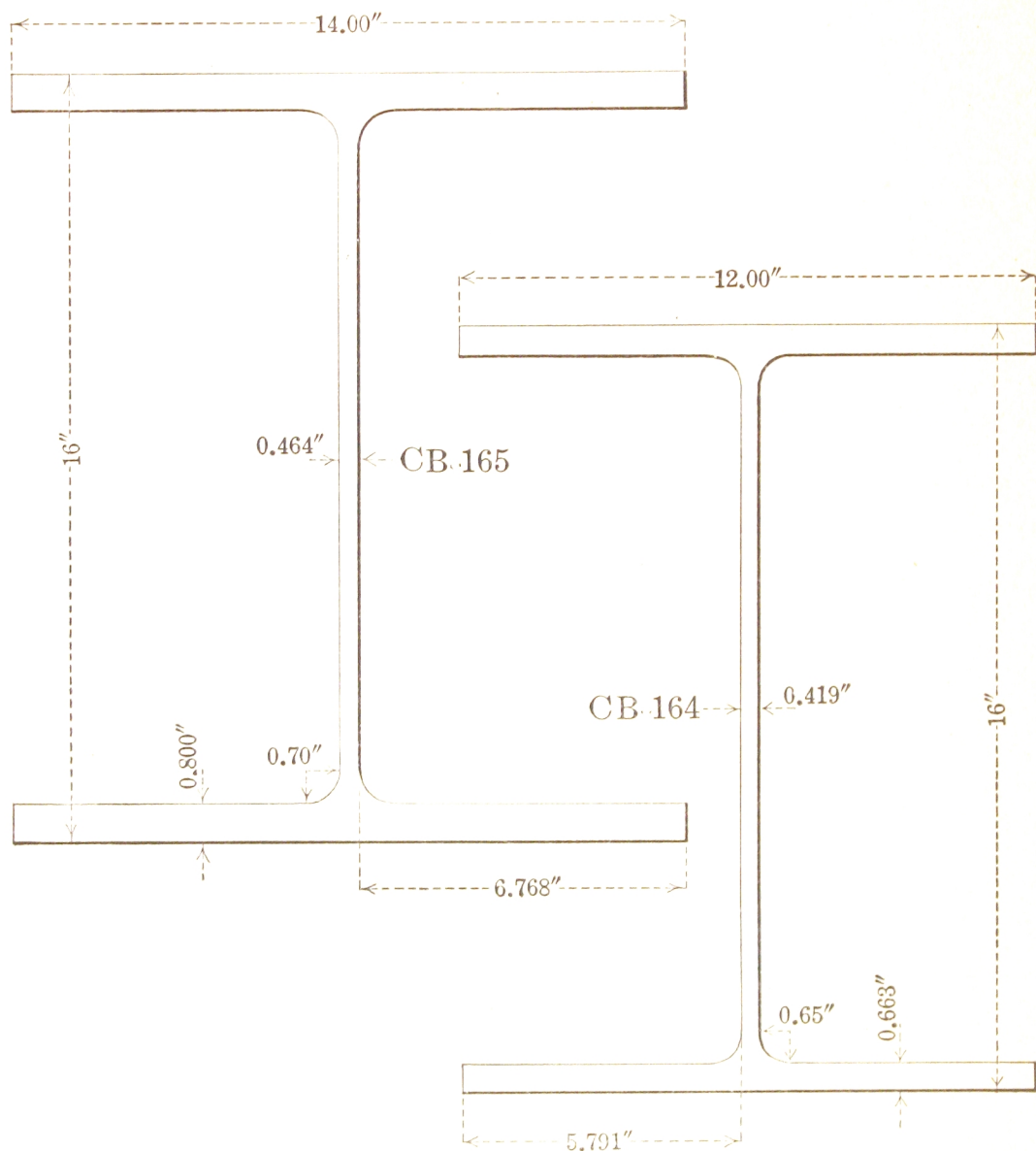


Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
CB 182	18.242	18 ¹⁵ / ₆₄	78	8.565	8 ⁹ / ₁₆	0.866	⁵⁵ / ₆₄	0.471	1 ⁵ / ₃₂
	18.110	18 ⁷ / ₆₄	72	8.530	8 ¹⁷ / ₃₂	0.800	⁵¹ / ₆₄	0.436	⁷ / ₁₆
	18.000	18	67	8.500	8 ¹ / ₂	0.745	³ / ₄	0.406	1 ³ / ₃₂
CB 181	18.252	18 ¹ / ₄	58	7.573	7 ³⁷ / ₆₄	0.676	⁴³ / ₆₄	0.393	2 ⁵ / ₆₄
	18.114	18 ⁷ / ₆₄	52	7.534	7 ¹⁷ / ₃₂	0.607	³⁹ / ₆₄	0.354	2 ³ / ₆₄
	18.000	18	47	7.500	7 ¹ / ₂	0.550	³⁵ / ₆₄	0.320	⁵ / ₁₆
	*18.024	18 ¹³ / ₃₂	51	7.555	7 ⁹ / ₁₆	0.562	⁹ / ₁₆	0.375	³ / ₈

*Special Section Web Thickness ³/₈".

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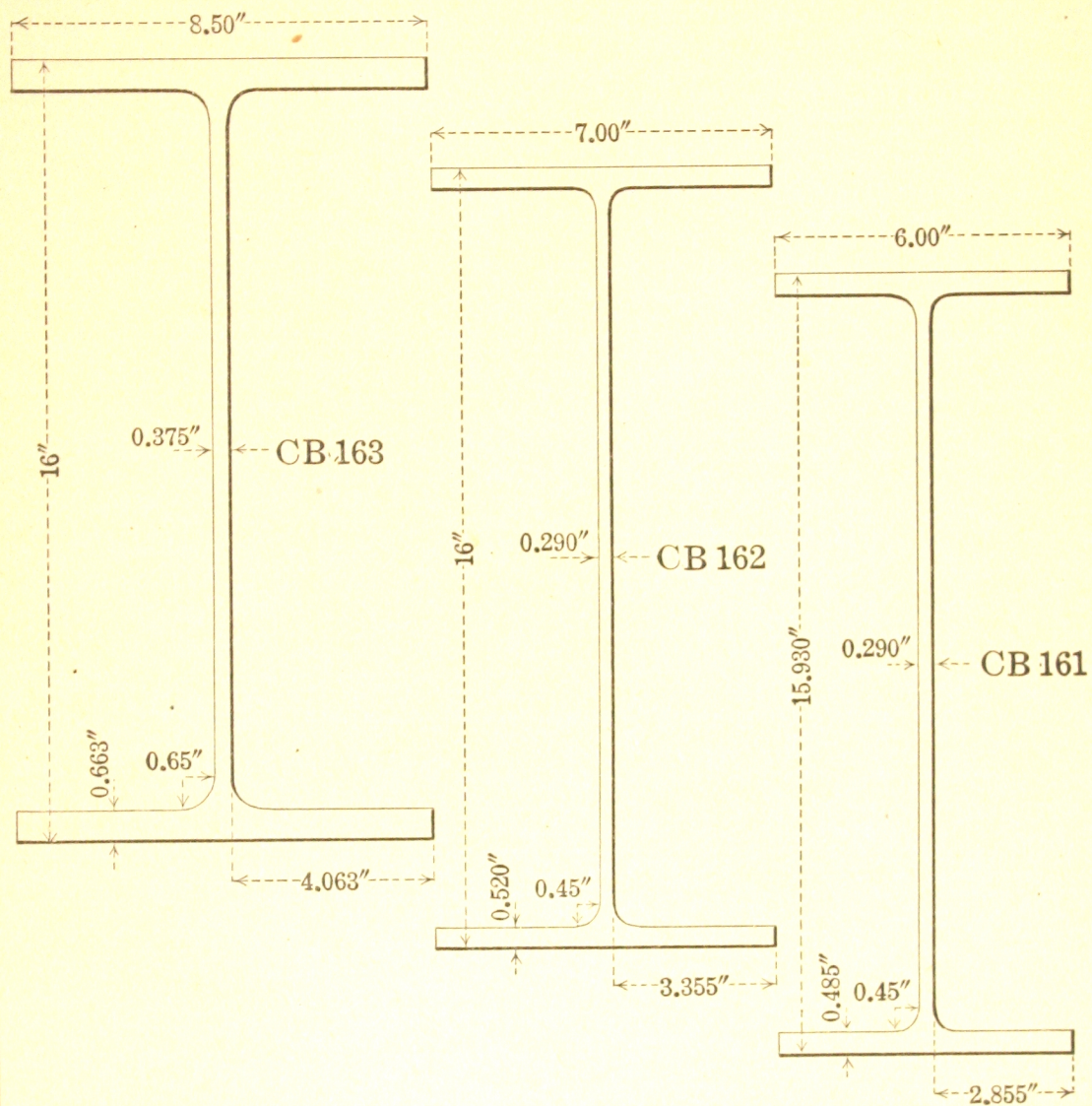
CARNEGIE BEAM SECTIONS—Continued



Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
CB 165	16.236	16 ¹⁵ / ₆₄	115	14.068	14 ¹ / ₁₆	0.918	⁵⁹ / ₆₄	0.532	1 ⁷ / ₃₂
	16.110	16 ⁷ / ₆₄	107	14.032	14 ¹ / ₃₂	0.855	⁵⁵ / ₆₄	0.496	¹ / ₂
	16.000	16	100	14.000	14	0.800	⁵¹ / ₆₄	0.464	1 ⁵ / ₃₂
CB 164	16.240	16 ¹⁵ / ₆₄	90	12.076	12 ⁵ / ₆₄	0.783	²⁵ / ₃₂	0.495	¹ / ₂
	16.120	16 ¹ / ₈	83	12.039	12 ¹ / ₃₂	0.723	²³ / ₃₂	0.458	²⁹ / ₆₄
	16.000	16	76	12.000	12	0.663	²¹ / ₃₂	0.419	²⁷ / ₆₄

CARNEGIE BEAM SECTIONS

CARNEGIE BEAM SECTIONS—Continued

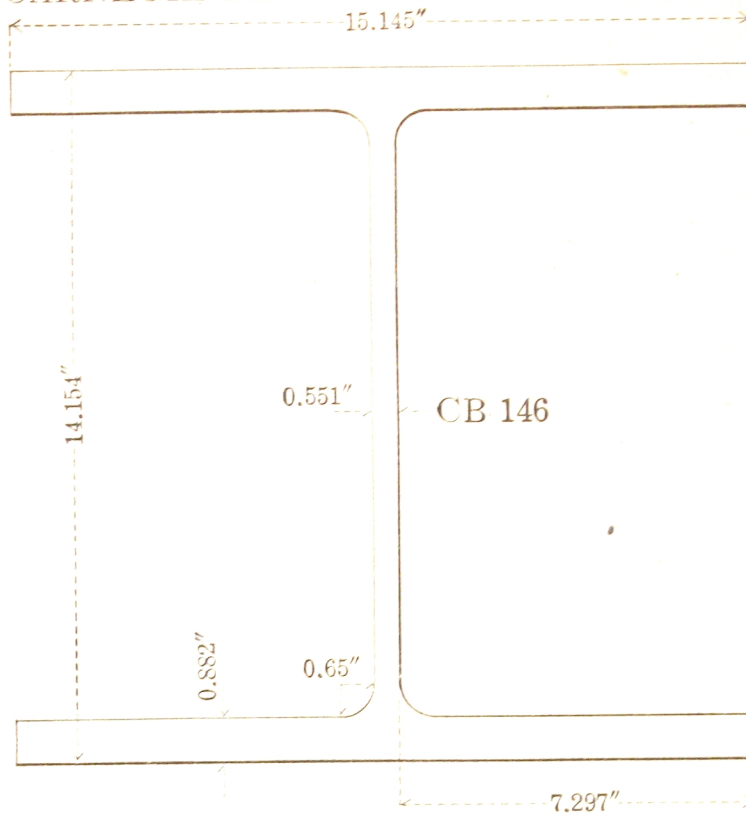


Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
CB 163	16.226	16 7/32	68	8.563	8 9/16	0.776	25/32	0.438	7/16
	16.114	16 7/64	63	8.531	8 17/32	0.720	23/32	0.406	13/32
	16.000	16	58	8.500	8 1/2	0.663	21/32	0.375	3/8
CB 162	16.254	16 1/4	50	7.072	7 5/64	0.647	41/64	0.362	23/64
	16.128	16 1/8	45	7.036	7 1/32	0.584	37/64	0.326	21/64
	16.000	16	40	7.000	7	0.520	33/64	0.290	19/64
	*15.934	15 15/16	43	7.085	7 5/64	0.487	31/64	0.375	3/8
CB 161	16.012	16 1/64	38	6.024	6 1/32	0.526	17/32	0.314	5/16
	15.930	15 15/16	35	6.000	6	0.485	31/64	0.290	19/64

*Special Section Web Thickness 3/8".

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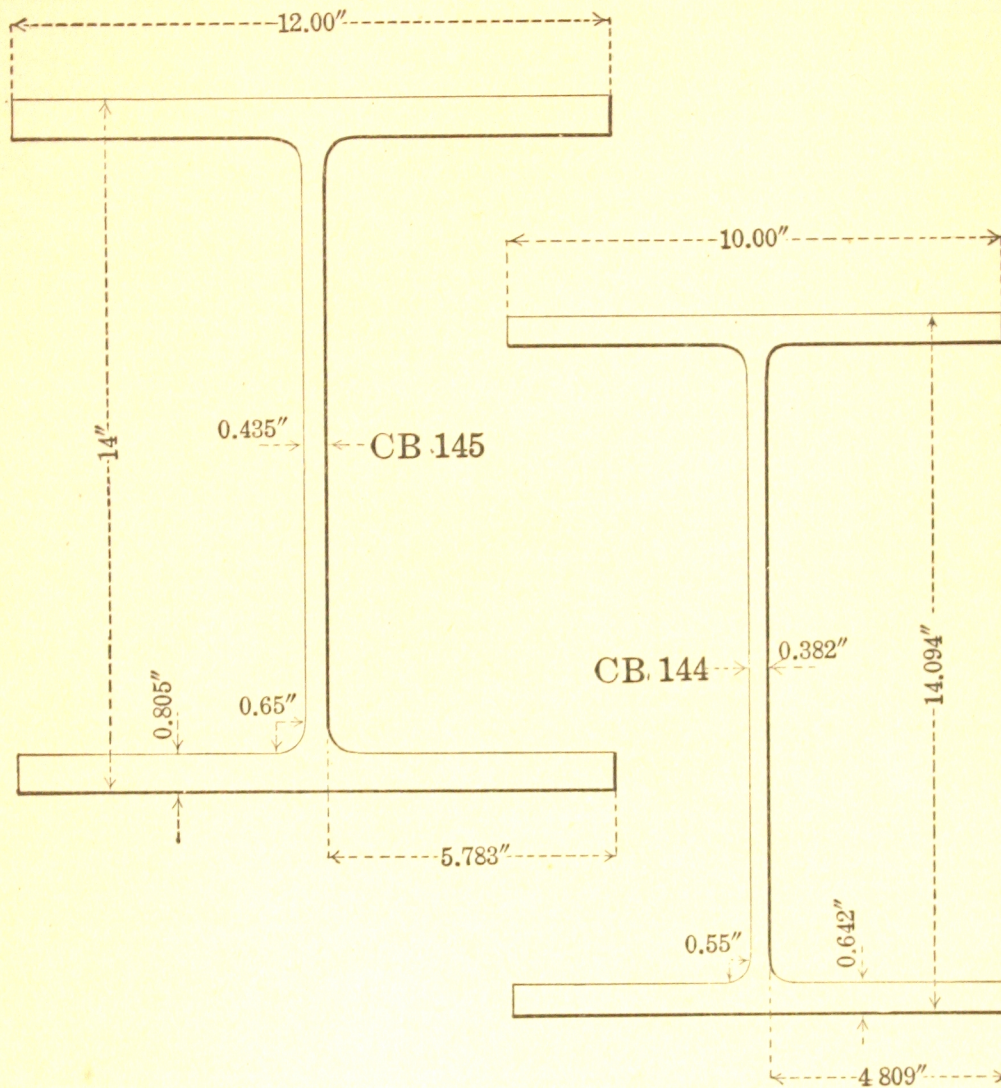
CARNEGIE BEAM SECTIONS—Continued



Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
CB 146	16.890	16 ⁵ / ₁₆	305	16.000	16	2.250	2 ¹ / ₄	1.406	1 ¹³ / ₃₂
	16.752	16 ³ / ₄	295	15.956	15 ⁶¹ / ₆₄	2.181	2 ³ / ₁₆	1.362	1 ²³ / ₆₄
	16.614	16 ³⁹ / ₆₄	285	15.912	15 ²⁹ / ₃₂	2.112	2 ⁷ / ₆₄	1.318	1 ⁵ / ₁₆
	16.472	16 ¹⁵ / ₃₂	275	15.870	15 ⁷ / ₈	2.041	2 ³ / ₆₄	1.276	1 ⁹ / ₃₂
	16.332	16 ²¹ / ₆₄	265	15.826	15 ⁵³ / ₆₄	1.971	1 ³¹ / ₃₂	1.232	1 ¹⁵ / ₆₄
	16.192	16 ³ / ₁₆	255	15.781	15 ²⁵ / ₃₂	1.901	1 ²⁹ / ₃₂	1.187	1 ³ / ₁₆
	16.050	16 ³ / ₆₄	245	15.738	15 ⁴⁷ / ₆₄	1.830	1 ⁵³ / ₆₄	1.144	1 ⁹ / ₆₄
	15.908	15 ²⁹ / ₃₂	235	15.693	15 ¹¹ / ₁₆	1.759	1 ⁴⁹ / ₆₄	1.099	1 ³ / ₃₂
	15.764	15 ⁴⁹ / ₆₄	225	15.650	15 ²¹ / ₃₂	1.687	1 ¹¹ / ₁₆	1.056	1 ¹ / ₁₆
	15.622	15 ⁵ / ₈	215	15.604	15 ³⁹ / ₆₄	1.616	1 ³⁹ / ₆₄	1.010	1 ¹ / ₆₄
	15.478	15 ³¹ / ₆₄	205	15.559	15 ⁹ / ₁₆	1.544	1 ³⁵ / ₆₄	0.965	3 ¹ / ₃₂
	15.334	15 ²¹ / ₆₄	195	15.513	15 ³³ / ₆₄	1.472	1 ¹⁵ / ₃₂	0.919	5 ⁹ / ₆₄
	15.188	15 ³ / ₁₆	185	15.469	15 ¹⁵ / ₃₂	1.399	1 ¹³ / ₃₂	0.875	7 ⁷ / ₈
	15.042	15 ³ / ₆₄	175	15.424	15 ²⁷ / ₆₄	1.326	1 ²¹ / ₆₄	0.830	5 ³ / ₆₄
	14.896	14 ⁵⁷ / ₆₄	165	15.377	15 ³ / ₈	1.253	1 ¹ / ₄	0.783	2 ⁵ / ₃₂
	14.750	14 ³ / ₄	155	15.330	15 ²¹ / ₆₄	1.180	1 ³ / ₁₆	0.736	4 ⁷ / ₆₄
	14.602	14 ³⁹ / ₆₄	145	15.284	15 ⁹ / ₃₂	1.106	1 ⁷ / ₆₄	0.690	1 ¹ / ₁₆
	14.452	14 ²⁹ / ₆₄	135	15.239	15 ¹⁵ / ₆₄	1.031	1 ¹ / ₃₂	0.645	4 ¹ / ₆₄
	14.304	14 ¹⁹ / ₆₄	125	15.191	15 ³ / ₁₆	0.957	6 ¹ / ₆₄	0.597	1 ⁹ / ₃₂
	14.154	14 ⁵ / ₃₂	115	15.145	15 ⁹ / ₆₄	0.882	7 ⁷ / ₈	0.551	3 ⁵ / ₆₄
	*14.162	14 ⁵ / ₃₂	131	15.468	15 ¹⁵ / ₃₂	0.886	5 ⁷ / ₆₄	0.874	7 ⁷ / ₈

*Special Section for Column Core.

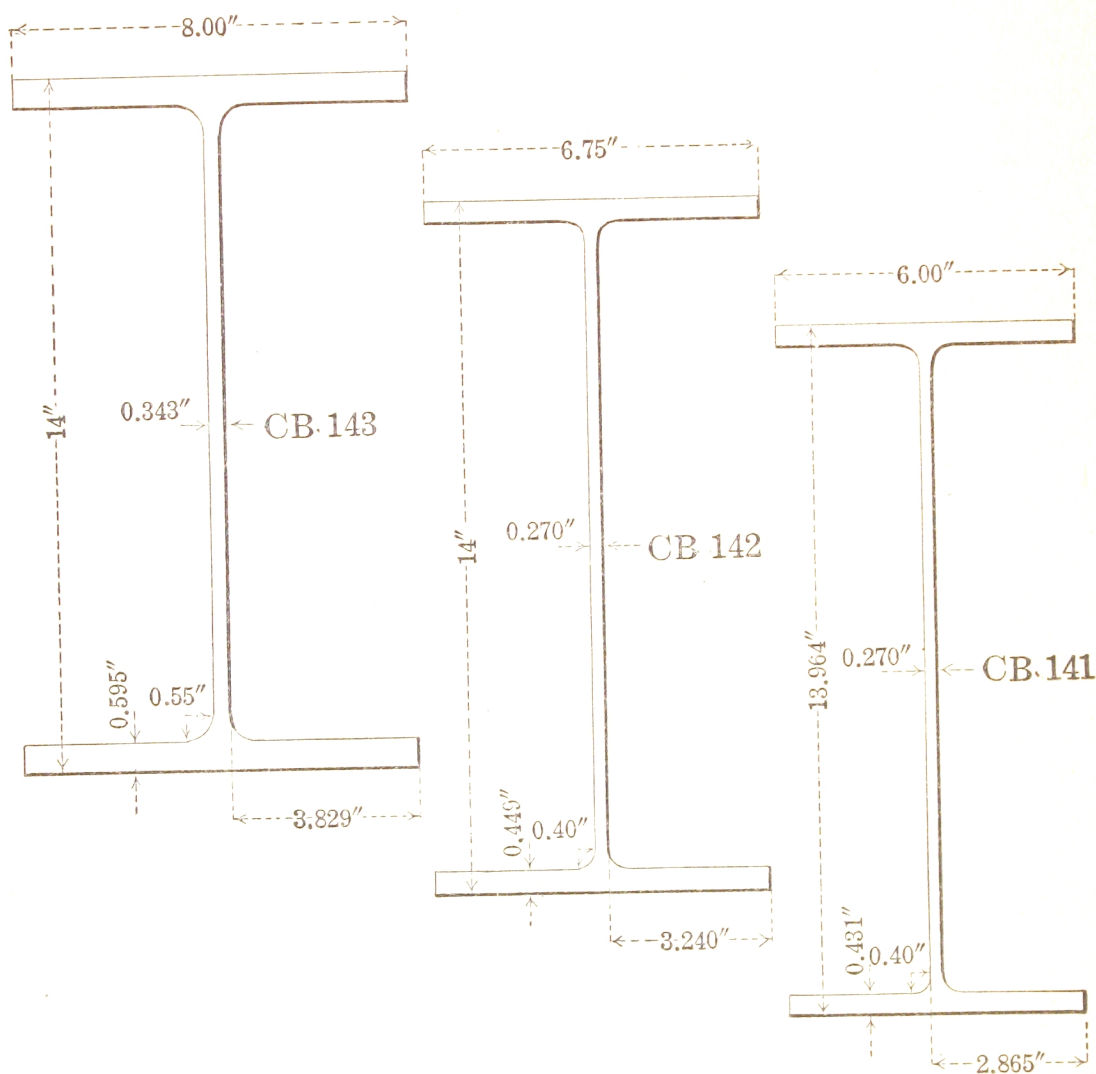
CARNEGIE BEAM SECTIONS—Continued



Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
CB 145	14.370	14 $\frac{3}{8}$	105	12.101	12 $\frac{3}{32}$	0.990	6 $\frac{3}{64}$	0.536	1 $\frac{7}{32}$
	14.186	14 $\frac{3}{16}$	95	12.050	12 $\frac{3}{64}$	0.898	5 $\frac{7}{64}$	0.485	3 $\frac{1}{64}$
	14.000	14	85	12.000	12	0.805	1 $\frac{3}{16}$	0.435	$\frac{7}{16}$
CB 144	14.382	14 $\frac{3}{8}$	75	10.086	10 $\frac{3}{32}$	0.786	2 $\frac{5}{32}$	0.468	1 $\frac{5}{32}$
	14.238	14 $\frac{15}{64}$	68	10.043	10 $\frac{3}{64}$	0.714	2 $\frac{3}{32}$	0.425	2 $\frac{7}{64}$
	14.094	14 $\frac{3}{32}$	61	10.000	10	0.642	4 $\frac{1}{64}$	0.382	$\frac{3}{8}$

CARNEGIE STEEL COMPANY

CARNEGIE BEAM SECTIONS—Continued

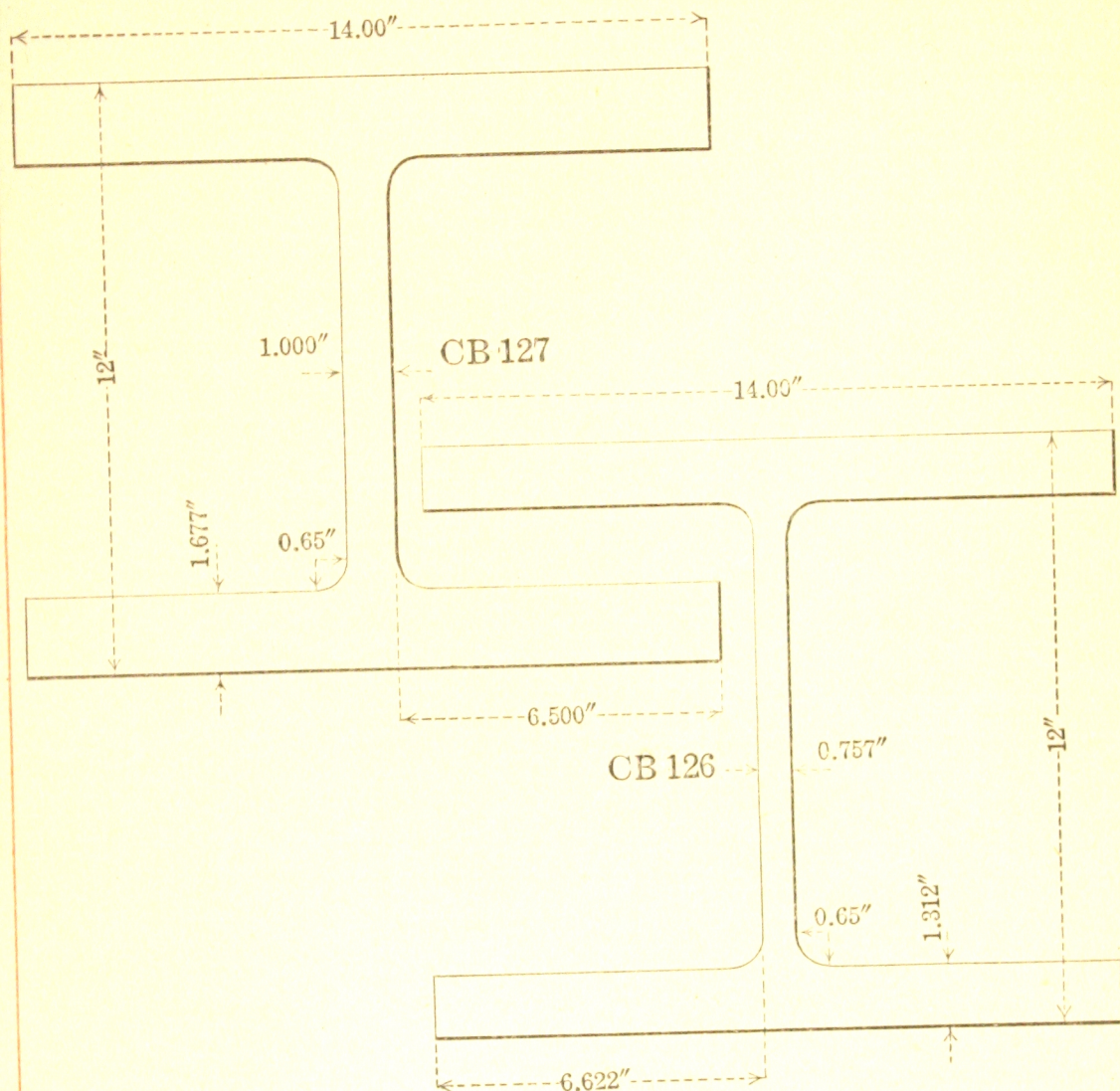


Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
CB 143	14.242	14 ¹⁵ / ₆₄	58	8.070	8 ¹ / ₁₆	0.716	23 ³ / ₂	0.413	13 ³ / ₂
	14.122	14 ¹ / ₈	53	8.035	8 ¹ / ₃₂	0.656	21 ³ / ₂	0.378	3 ³ / ₈
	14.000	14	48	8.000	8	0.595	19 ³ / ₂	0.343	11 ³ / ₂
CB 142	14.240	14 ¹⁵ / ₆₄	42	6.822	6 ⁵³ / ₆₄	0.569	9 ¹ / ₁₆	0.342	11 ³ / ₂
	14.160	14 ⁵ / ₃₂	39	6.798	6 ⁵¹ / ₆₄	0.529	17 ³ / ₂	0.318	5 ¹ / ₁₆
	14.080	14 ⁵ / ₆₄	36	6.774	6 ²⁵ / ₃₂	0.489	31 ³ / ₆₄	0.294	19 ³ / ₆₄
	14.000	14	33	6.750	6 ³ / ₄	0.449	29 ³ / ₆₄	0.270	17 ³ / ₆₄
	*14.000	14	38	6.855	6 ⁵⁵ / ₆₄	0.449	29 ³ / ₆₄	0.375	3 ³ / ₈
CB 141	13.964	13 ³¹ / ₃₂	30	6.000	6	0.431	7 ¹ / ₁₆	0.270	17 ³ / ₆₄

*Special Section Web Thickness ³/₈".

CARNEGIE BEAM SECTIONS

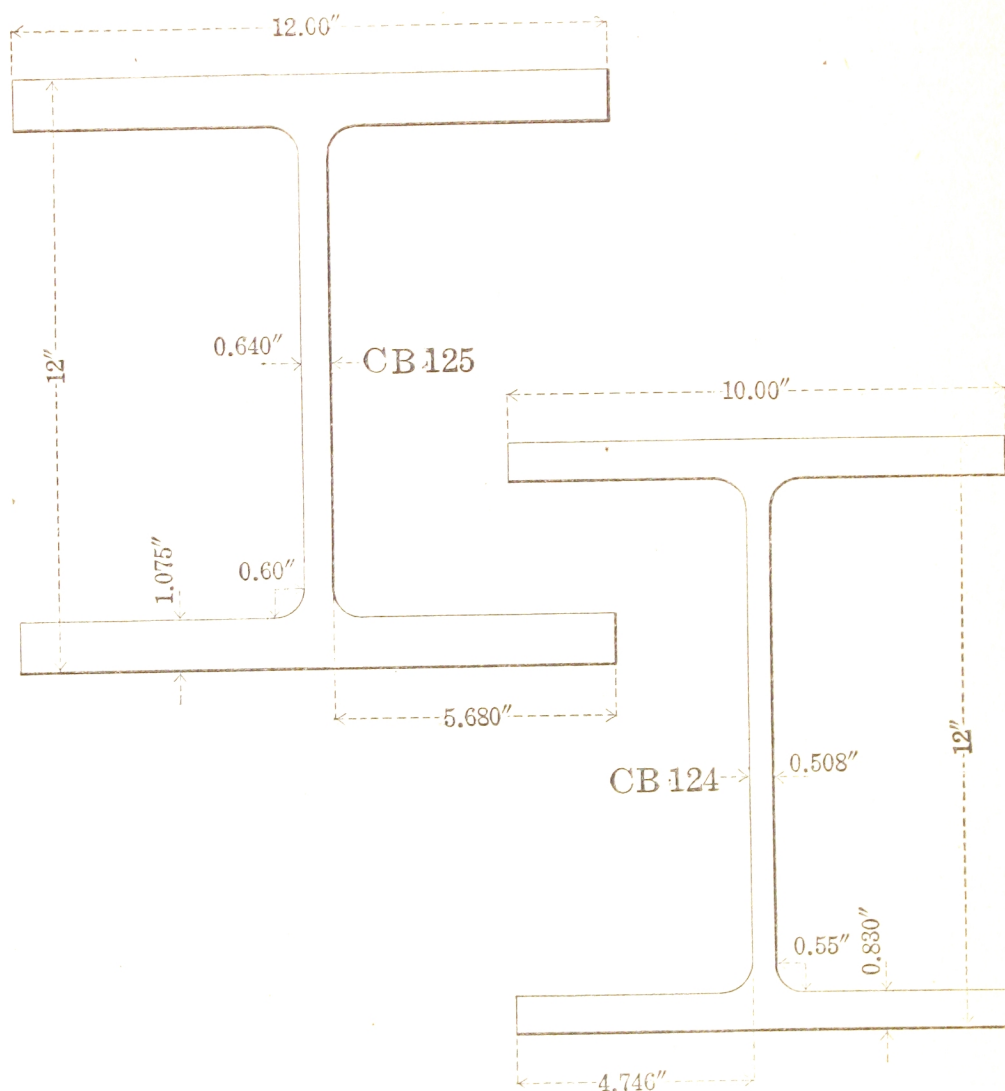
CARNEGIE BEAM SECTIONS—Continued



Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
CB 127	C O N S T A N T 12	12	230	14.980	14 ⁶³ / ₆₄	1.677	1 ⁴³ / ₆₄	1.980	1 ⁶³ / ₆₄
			220	14.735	14 ⁴⁷ / ₆₄			1.735	1 ⁴⁷ / ₆₄
			210	14.490	14 ³¹ / ₆₄			1.490	1 ³¹ / ₆₄
			200	14.245	14 ¹ / ₄			1.245	1 ¹ / ₄
			190	14.000	14			1.000	1
CB 126	D E P T H 12	12	180	14.735	14 ⁴⁷ / ₆₄	1.312	1 ⁵ / ₁₆	1.492	1 ³¹ / ₆₄
			170	14.490	14 ³¹ / ₆₄			1.247	1 ¹ / ₄
			160	14.245	14 ¹ / ₄			1.002	1
			150	14.000	14			0.757	³ / ₄

CARNEGIE STEEL COMPANY

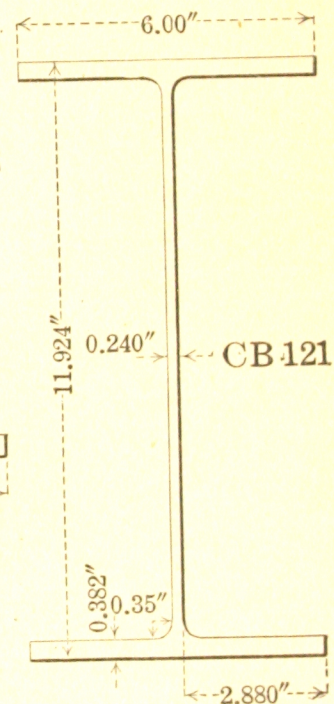
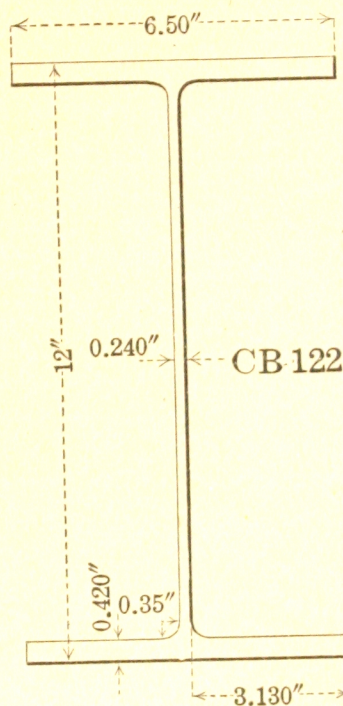
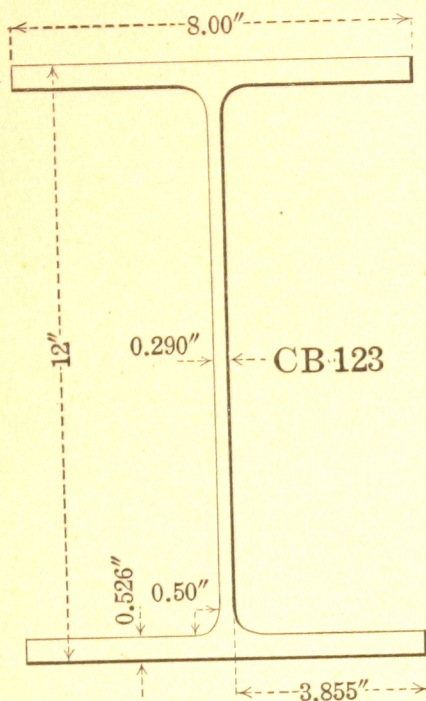
CARNEGIE BEAM SECTIONS—Continued



Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
CB 125	12	12	140	12.736	12 ⁴⁷ / ₆₄	1.075	1 ⁵ / ₆₄	1.376	1 ³ / ₈
			130	12.491	12 ³¹ / ₆₄			1.131	1 ¹ / ₈
			120	12.245	12 ¹ / ₄			0.885	⁵⁷ / ₆₄
			110	12.000	12			0.640	⁴¹ / ₆₄
CB 124	12	12	100	10.613	10 ³⁹ / ₆₄	0.830	⁵³ / ₆₄	1.121	1 ¹ / ₈
			91	10.392	10 ²⁵ / ₆₄			0.900	²⁹ / ₃₂
			83	10.196	10 ¹³ / ₆₄			0.704	⁴⁵ / ₆₄
			75	10.000	10			0.508	³³ / ₆₄

CARNEGIE BEAM SECTIONS

CARNEGIE BEAM SECTIONS—Continued

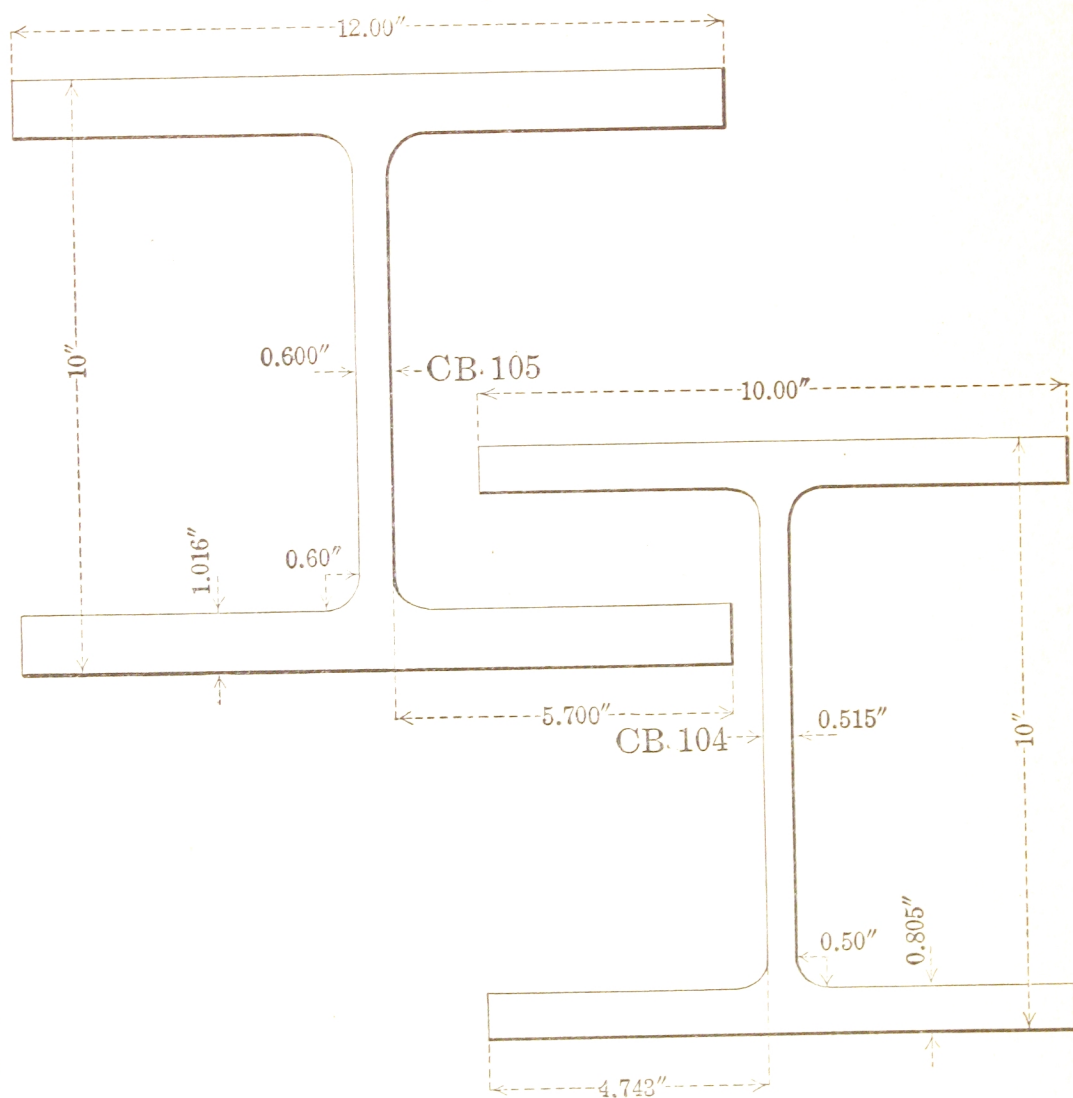


Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
CB 123	12.258	12 ¹ / ₁₆	50	8.071	8 ⁵ / ₁₆	0.655	2 ¹ / ₃₂	0.361	2 ³ / ₆₄
	12.130	12 ¹ / ₈	45	8.036	8 ¹ / ₃₂	0.591	1 ⁹ / ₃₂	0.326	2 ¹ / ₆₄
	12.000	12	40	8.000	8	0.526	1 ⁷ / ₃₂	0.290	1 ⁹ / ₆₄
CB 122	12.236	12 ¹ / ₁₆	36	6.568	6 ⁹ / ₁₆	0.538	1 ⁷ / ₃₂	0.308	5 ¹ / ₁₆
	12.118	12 ¹ / ₈	32	6.534	6 ¹ / ₃₂	0.479	3 ¹ / ₆₄	0.274	9 ³ / ₃₂
	12.000	12	28	6.500	6 ¹ / ₂	0.420	2 ⁷ / ₆₄	0.240	1 ⁵ / ₆₄
	*12.022	12 ¹ / ₆₄	34	6.635	6 ⁴ / ₁₆	0.431	7 ¹ / ₁₆	0.375	3 ³ / ₈
CB 121	11.924	11 ⁵ / ₁₆	25	6.000	6	0.382	3 ³ / ₈	0.240	1 ⁵ / ₆₄

*Special Section Web Thickness ³/₈".

CARNEGIE STEEL COMPANY

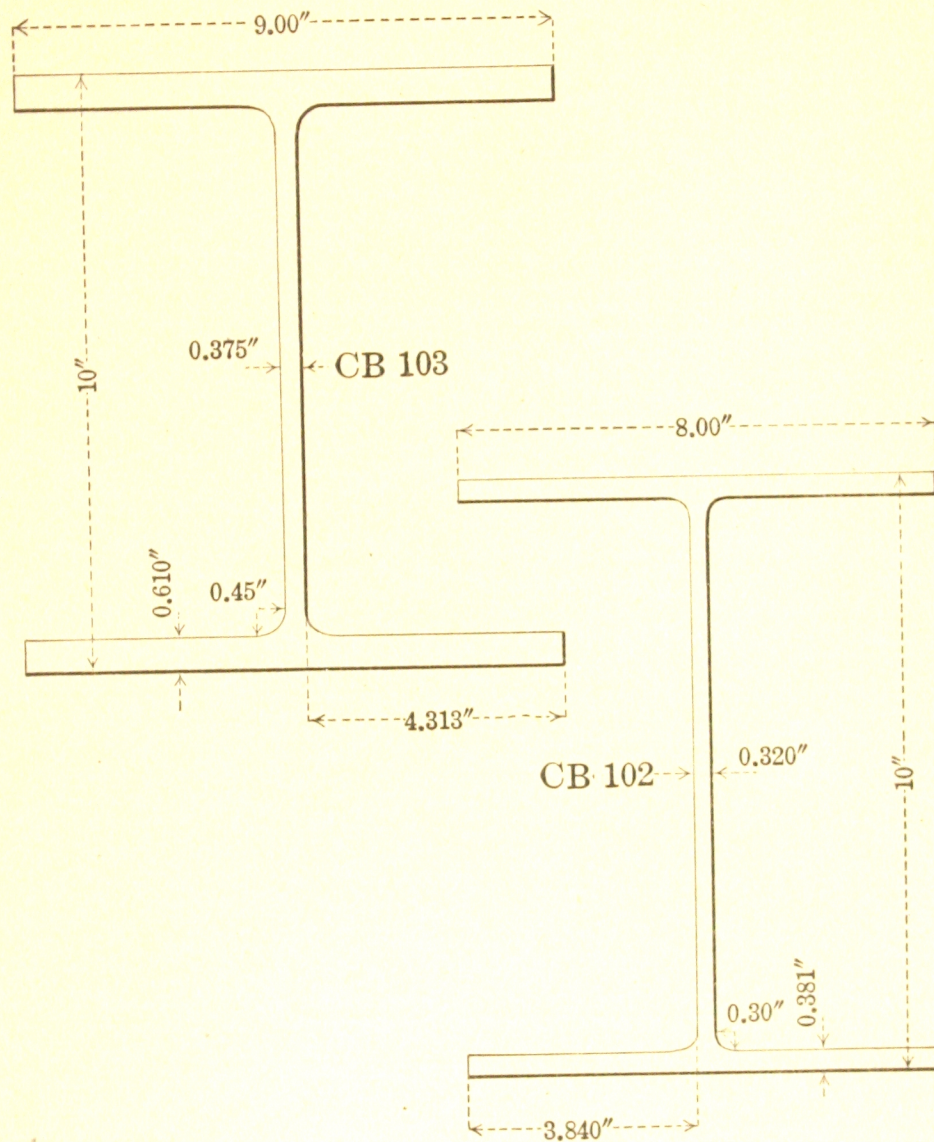
CARNEGIE BEAM SECTIONS—Continued



Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
CB 105	CONSTANT	10	140	13.177	13 ¹ / ₆₄	1.016	1 ¹ / ₆₄	1.777	1 ²⁵ / ₃₂
			132	12.941	12 ¹⁵ / ₁₆			1.541	1 ³⁵ / ₆₄
			124	12.706	12 ⁴⁵ / ₆₄			1.306	1 ⁵ / ₁₆
			116	12.471	12 ¹⁵ / ₃₂			1.071	1 ⁵ / ₁₆
			108	12.236	12 ¹⁵ / ₆₄			0.836	2 ⁷ / ₃₂
			100	12.000	12			0.600	1 ⁹ / ₃₂
CB 104	DEPTH	10	92	10.647	10 ⁴¹ / ₆₄	0.805	13/16	1.162	5 ⁵ / ₃₂
			84	10.411	10 ¹³ / ₃₂			0.926	5 ⁹ / ₆₄
			77	10.206	10 ¹³ / ₆₄			0.721	2 ³ / ₃₂
			70	10.000	10			0.515	3 ³ / ₆₄

CARNEGIE BEAM SECTIONS

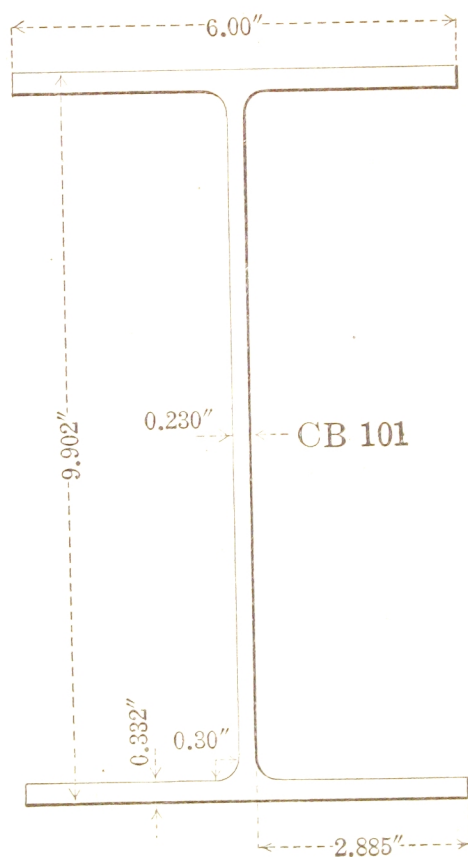
CARNEGIE BEAM SECTIONS—Continued



Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
CB 103	CONSTANT 10	10	63	9.412	9 ¹³ / ₃₂	0.610	39/64	0.787	25 ⁵ / ₃₂
			56	9.206	9 ¹³ / ₆₄			0.581	37 ⁵ / ₆₄
			49	9.000	9			0.375	3 ⁵ / ₈
CB 102	DEPTH 10	10	42	8.324	8 ²¹ / ₆₄	0.381	3/8	0.644	4 ¹ / ₆₄
			36	8.147	8 ⁹ / ₆₄			0.467	15 ⁵ / ₃₂
			31	8.000	8			0.320	5 ¹ / ₁₆

CARNEGIE STEEL COMPANY

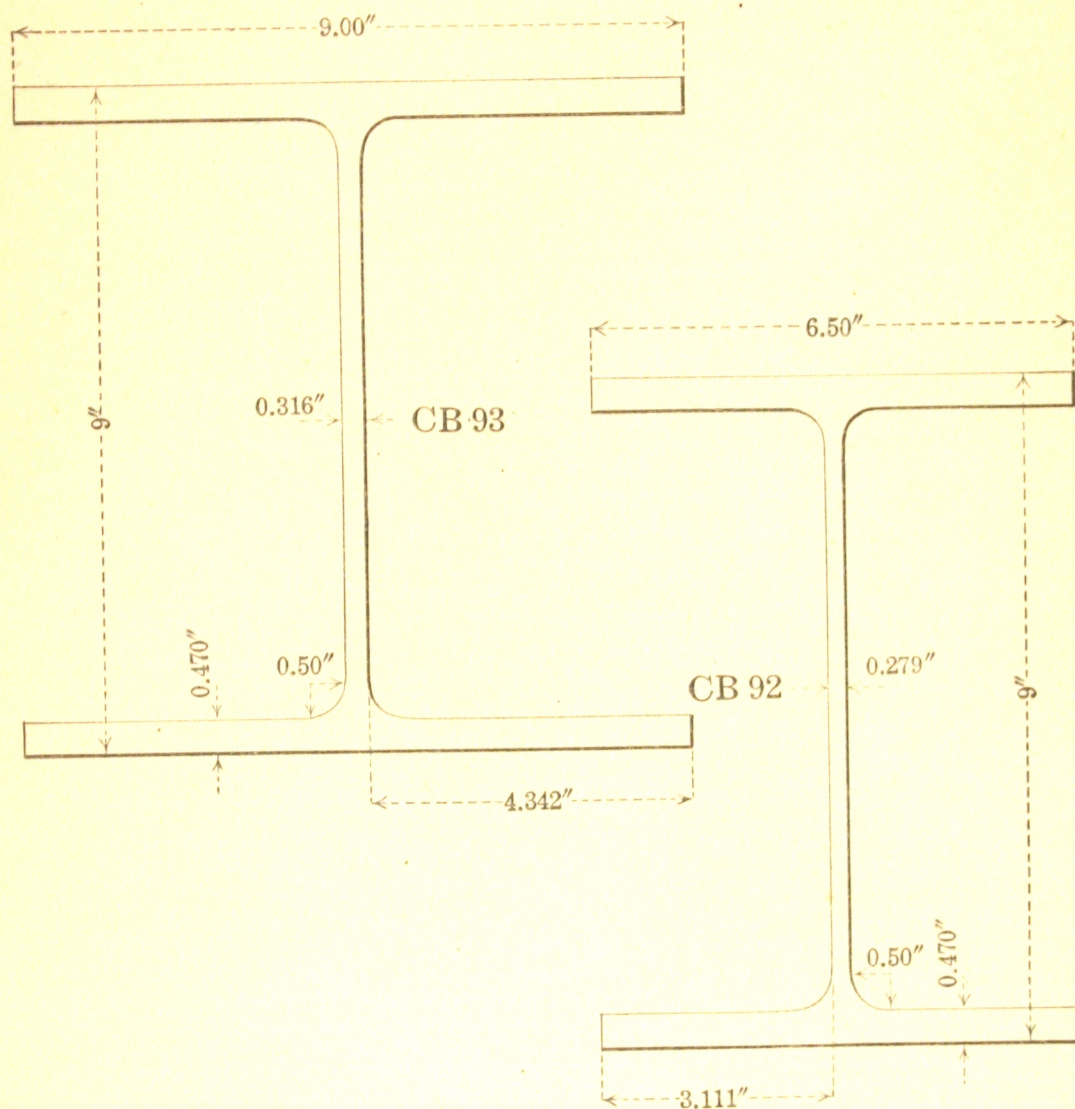
CARNEGIE BEAM SECTIONS—Continued



Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
CB 101	10.228	10 ¹⁵ / ₆₄	30	6.068	6 ¹ / ₁₆	0.495	¹ / ₂	0.298	¹⁹ / ₆₄
	10.098	10 ³ / ₃₂	26	6.029	6 ¹ / ₃₂	0.430	⁷ / ₁₆	0.259	¹⁷ / ₆₄
	10.000	10	23	6.000	6	0.381	³ / ₈	0.230	¹⁵ / ₆₄
	9.902	9 ²⁹ / ₃₂	21	6.000	6	0.332	²¹ / ₆₄	0.230	¹⁵ / ₆₄

CARNEGIE BEAM SECTIONS

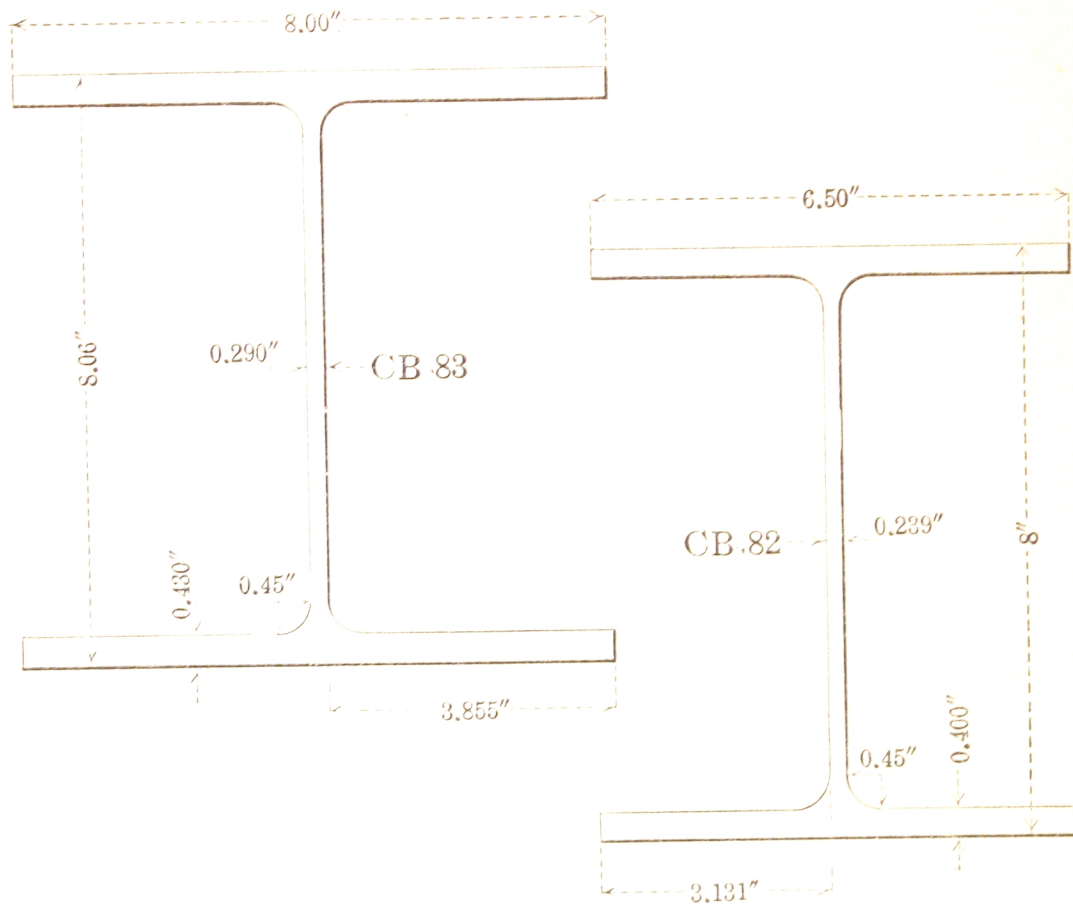
CARNEGIE BEAM SECTIONS—Continued



Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
CB 93	9.242	$9\frac{15}{64}$	48	9.082	$9\frac{5}{64}$	0.591	$1\frac{9}{32}$	0.398	$2\frac{5}{64}$
	9.122	$9\frac{1}{8}$	43	9.041	$9\frac{3}{64}$	0.531	$1\frac{7}{32}$	0.357	$2\frac{3}{64}$
	9.000	9	38	9.000	9	0.470	$1\frac{15}{32}$	0.316	$\frac{5}{16}$
CB 92	9.192	$9\frac{3}{16}$	35	6.556	$6\frac{9}{16}$	0.566	$\frac{9}{16}$	0.335	$2\frac{1}{64}$
	9.096	$9\frac{3}{32}$	32	6.528	$6\frac{17}{32}$	0.518	$\frac{33}{64}$	0.307	$\frac{5}{16}$
	9.000	9	29	6.500	$6\frac{1}{2}$	0.470	$1\frac{15}{32}$	0.279	$\frac{9}{32}$

CARNEGIE STEEL COMPANY

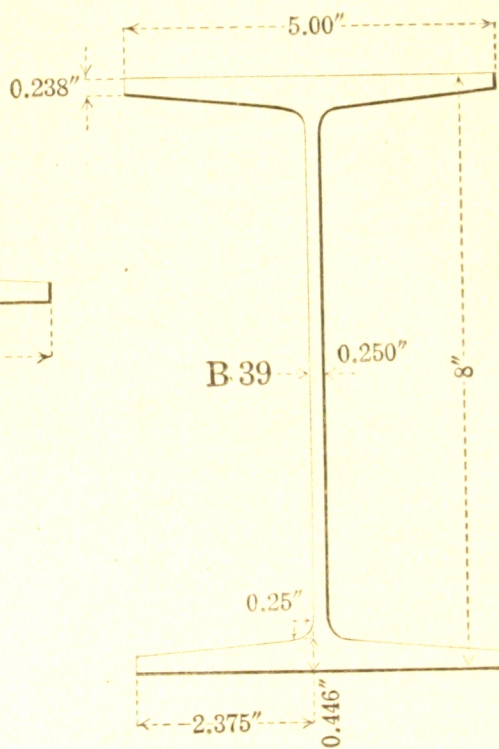
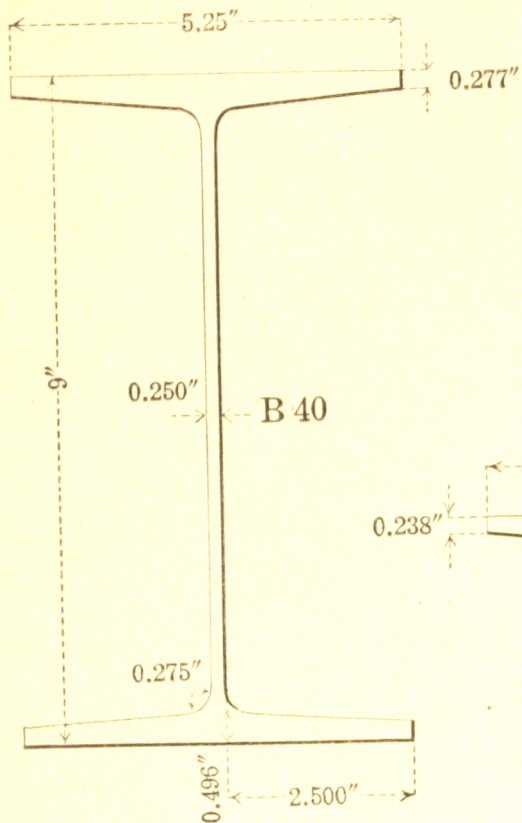
CARNEGIE BEAM SECTIONS—Concluded



Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
CB 83	9.606	$9\frac{39}{64}$	90	8.520	$8\frac{33}{64}$	1.203	$1\frac{13}{64}$	0.810	$1\frac{3}{16}$
	9.456	$9\frac{29}{64}$	84	8.469	$8\frac{13}{32}$	1.128	$1\frac{1}{8}$	0.759	$\frac{47}{64}$
	9.302	$9\frac{19}{64}$	78	8.418	$8\frac{27}{64}$	1.051	$1\frac{3}{64}$	0.708	$\frac{45}{64}$
	9.150	$9\frac{5}{32}$	72	8.366	$8\frac{23}{64}$	0.975	$\frac{31}{32}$	0.656	$\frac{41}{64}$
	8.994	9	66	8.314	$8\frac{5}{16}$	0.897	$\frac{57}{64}$	0.604	$\frac{39}{64}$
	8.838	$8\frac{27}{32}$	60	8.261	$8\frac{17}{64}$	0.819	$1\frac{3}{16}$	0.551	$\frac{35}{64}$
	8.680	$8\frac{11}{16}$	54	8.208	$8\frac{13}{64}$	0.740	$\frac{47}{64}$	0.498	$\frac{1}{2}$
	8.520	$8\frac{33}{64}$	48	8.155	$8\frac{5}{32}$	0.660	$\frac{21}{32}$	0.445	$\frac{7}{16}$
	8.360	$8\frac{23}{64}$	42	8.100	$8\frac{3}{32}$	0.580	$\frac{37}{64}$	0.390	$\frac{25}{64}$
	8.198	$8\frac{13}{64}$	36	8.046	$8\frac{3}{64}$	0.499	$\frac{1}{2}$	0.336	$\frac{11}{32}$
CB 82	8.060	$8\frac{1}{16}$	31	8.000	8	0.430	$\frac{7}{16}$	0.290	$\frac{19}{64}$
	8.196	$8\frac{13}{64}$	30	6.559	$6\frac{9}{16}$	0.498	$\frac{1}{2}$	0.298	$\frac{19}{64}$
	8.098	$8\frac{3}{32}$	27	6.529	$6\frac{17}{32}$	0.449	$\frac{29}{64}$	0.268	$\frac{17}{64}$
	8.000	8	24	6.500	$6\frac{1}{2}$	0.400	$\frac{13}{32}$	0.239	$\frac{15}{64}$

CARNEGIE BEAM SECTIONS

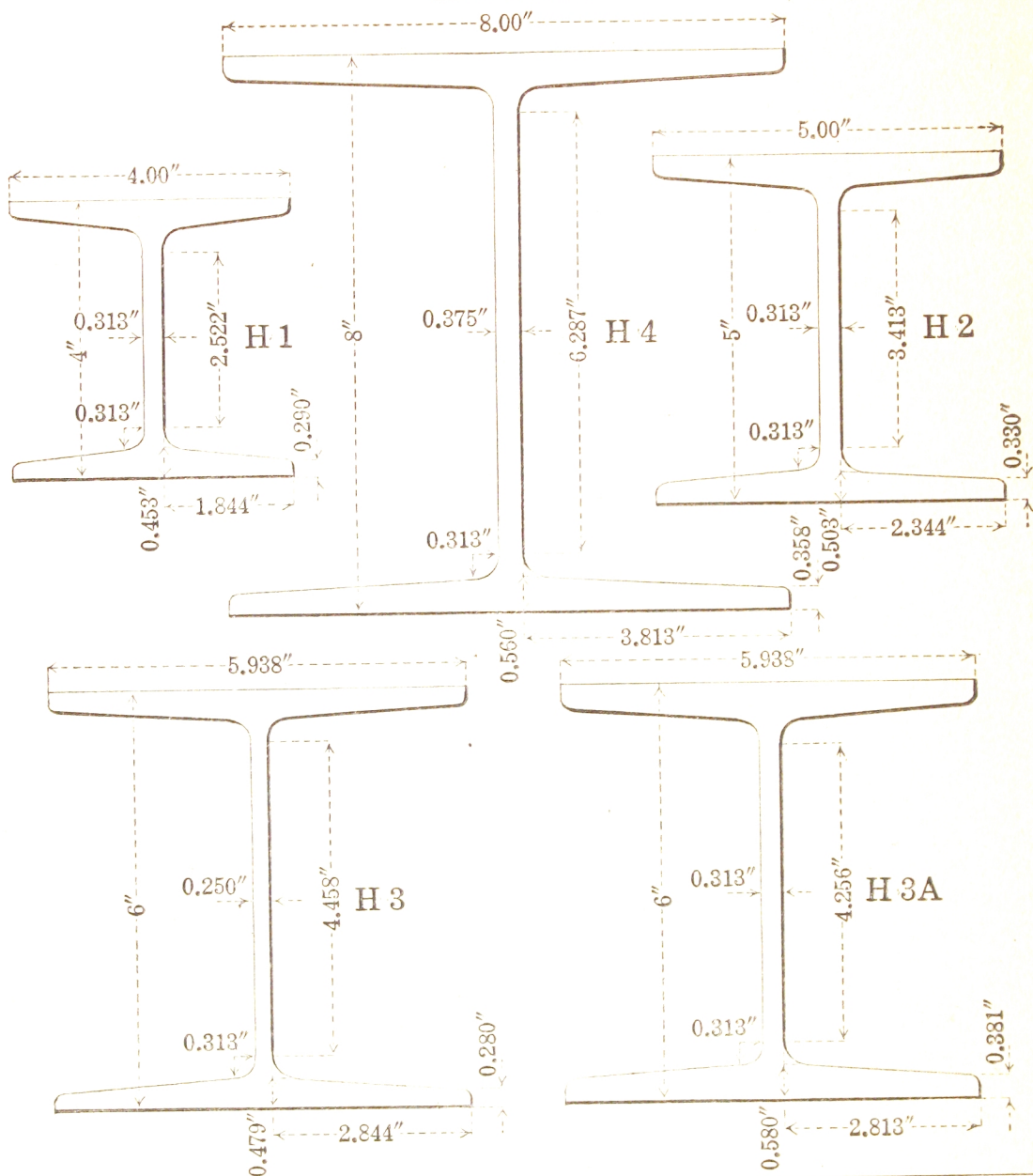
STANDARD MILL SECTIONS



Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Mean Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
B 40	9	9	25	5.380	5 ³ / ₈	0.3865	²⁵ / ₆₄	0.380	³ / ₈
			21	5.250	5 ¹ / ₄			0.250	¹ / ₄
B 39	8	8	21	5.110	5 ⁷ / ₆₄	0.342	¹¹ / ₃₂	0.360	²³ / ₆₄
			18	5.000	5			0.250	¹ / ₄

CARNEGIE STEEL COMPANY

H-BEAMS



Section Index	Depth of Section, Inches		Weight per Foot, Pounds	Flange Width, Inches		Mean Flange Thickness, Inches		Web Thickness, Inches	
	Decimal	Fraction		Decimal	Fraction	Decimal	Fraction	Decimal	Fraction
H 4	8	8	37.7	8.125	8 $\frac{1}{8}$	0.459	29 $\frac{3}{4}$	0.500	1 $\frac{1}{2}$
			34.3	8.000	8			0.375	3 $\frac{3}{8}$
			32.6	7.938	7 $\frac{15}{16}$			0.313	5 $\frac{1}{16}$
H 3A	6	6	27.5	6.063	6 $\frac{1}{16}$	0.481	31 $\frac{3}{4}$	0.438	7 $\frac{1}{16}$
			25.0	5.938	5 $\frac{15}{16}$			0.313	5 $\frac{1}{16}$
H 3	6	6	22.5	6.063	6 $\frac{1}{16}$	0.379	3 $\frac{3}{8}$	0.375	3 $\frac{3}{8}$
			20.0	5.938	5 $\frac{15}{16}$			0.250	1 $\frac{1}{4}$
H 2	5	5	18.9	5.000	5	0.417	27 $\frac{3}{4}$	0.313	5 $\frac{1}{16}$
H 1	4	4	13.8	4.000	4	0.372	3 $\frac{3}{8}$	0.313	5 $\frac{1}{16}$

Full information as to uses of H-Beams is given in pamphlet entitled "Steel Mine Timbers."

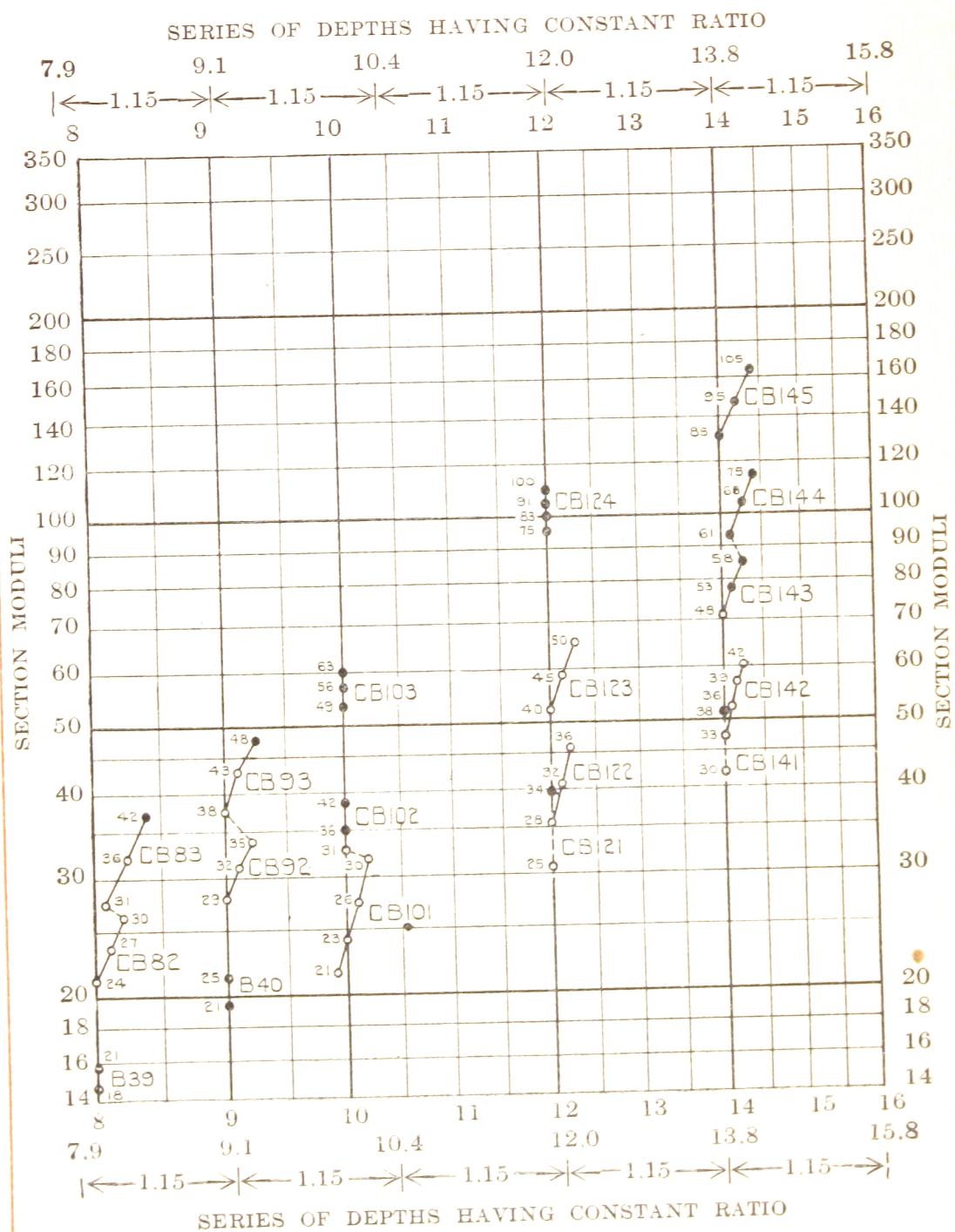
CARNEGIE
BEAM SECTIONS

ELEMENTS AND PROPERTIES

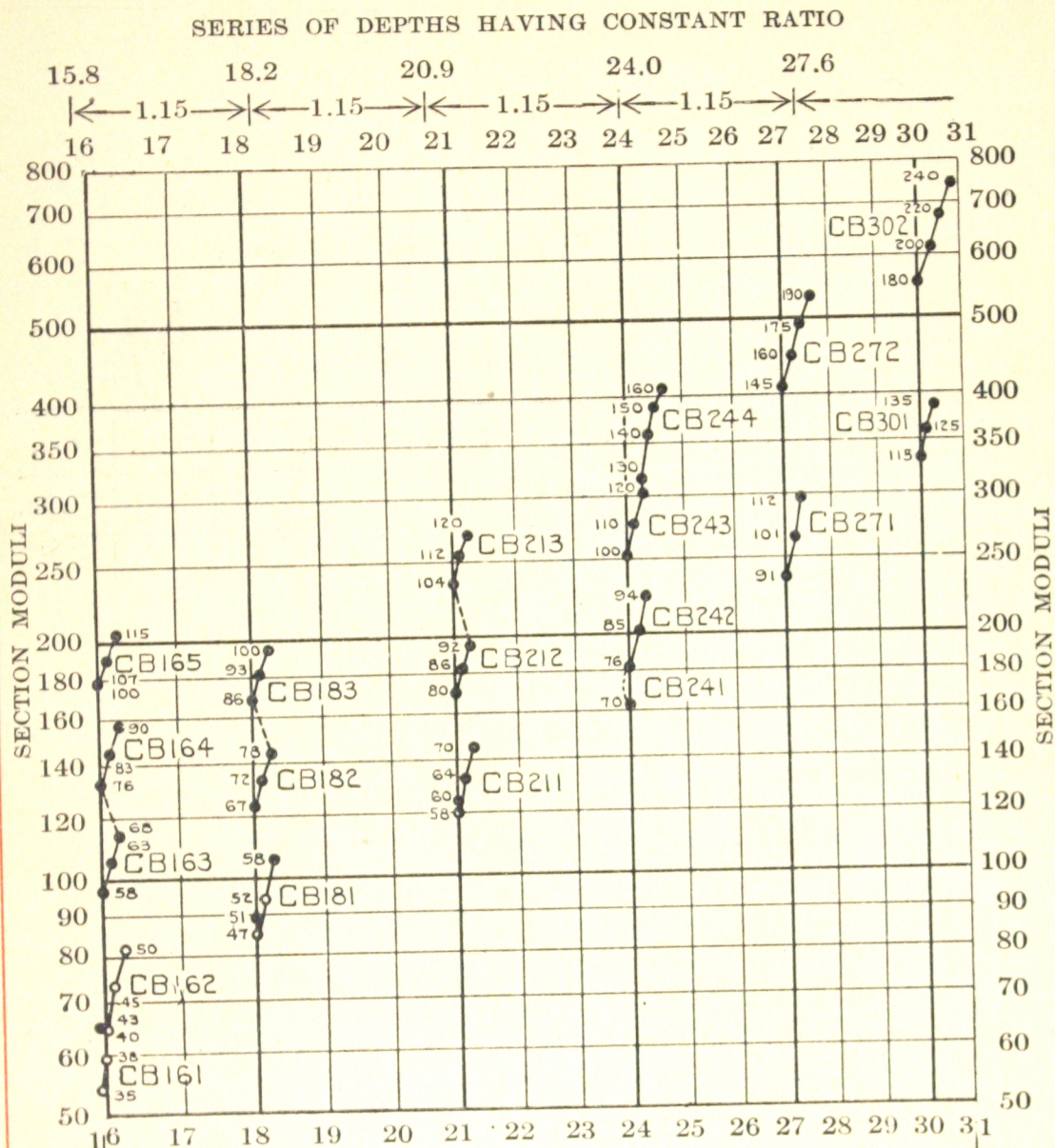
CARNEGIE STEEL COMPANY

CARNEGIE BEAM SECTIONS

RANGE OF SECTIONS
SELECTED FOR USE AS BEAMS



CARNEGIE BEAM SECTIONS



CARNEGIE STEEL COMPANY

CARNEGIE BEAM SECTIONS

BEAM SECTIONS COMPARATIVE TABLE OF SECTION MODULI

Section Modulus	30 In.		27 In.		24 In.		21 In.		Section Modulus	24 In.		21 In.		18 In.		16 In.		14 In.	
	Wt.	No.	Wt.	No.	Wt.	No.	Wt.	No.		Wt.	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.	No.
738	240	CB 3 0 2							236			104							
676	220								225	94			CB 2 1 3						
615	200								205							115			
553	180								203	85									
535			190						196		CB 2 4 2	92		100					
492			175						191							107			
450			160						184			86					CB 1 6 5		
411					160				182	76			CB 2 1 2	93		CB 1 8 3			
408			145						178						100				
390	135	CB 3 0 1							171			80							
385					150			CB 2 4 4	168					86					
361	125								163	70								105	
359					140				157							90			
334					130				147									95	CB 1 4 5
332	115								145		CB 2 4 1	70	CB 2 1 1	78		83			
302						120			133			64	1	72	CB 1 8 2	76	CB 1 6 4		
293			112						132									85	
277					110				124			60		67					
272							CB 2 4 3	120	120			58							
265			101						115										
254							112	CB 2 1 3	114							68	CB 1 6 3		CB 1 4 4
252					100														
238			91																

CARNEGIE BEAM SECTIONS

CARNEGIE BEAM SECTIONS—Continued

BEAM SECTIONS

COMPARATIVE TABLE OF SECTION MODULI

Section Modulus	18 In.		16 In.		14 In.		12 In.		10 In.		Section Modulus	14 In.		12 In.		10 In.		9 In.		8 In.	
	Wt.	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.	No.		Wt.	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.	No.
110							100				47.8		CB 1 4 2					48			
105	58		63				91				47.6	33									
104					68						45.8			36							
100			CB 1 6 3		CB 1 4 4		83		CB 1 2 4		42.9							43			
97.1			58								41.8	30	CB 1 4 1						CB 9 3		
95.1		CB 1 8 1					75				40.7			32							
94.4	52										39.6			34	CB 1 2 2						
93.1					61						38.1					42					
89.9	51										37.9							38			
85.6					58						37.4									42	
85.4	47										35.6			28			CB 1 0 2				
81.9			50		CB 1 6 2		CB 1 4 3				35.1					36					
78.2					53						33.8							35			
73.8			45								32.7					31					
70.9					48						32.0								CB 9 2	36	CB 8 3
65.7			43								31.9					30					
65.6			40								30.9							32			
65.4							50	CB 1 2 3			30.7			25							
60.6					42						28.0							29			
60.1									63		27.6					26	CB 1 0 1				
59.3			38	CB 1 6 1							27.5									31	
58.8							45				26.3					CB 1 2 1				30	
56.6									56	CB 1 0 3	24.4					23					
56.3					39	CB 1 4 2					23.7									27	CB 8 2
54.7			35								21.7					21					
53.2									49		21.2							25			
52.3							40				21.1									24	
51.9					36						19.5							21	B 4 0		B 3 9
51.1					38						15.9									21	
											14.7									18	

CARNEGIE STEEL COMPANY

CARNEGIE BEAM SECTIONS—Continued

COLUMN SECTIONS

COMPARATIVE TABLE OF RADII OF GYRATION AND AREAS

Area	14 In.			12 In.			10 In.			Area
	Weight	r 2-2	No.	Weight	r 2-2	No.	Weight	r 2-2	No.	
89.70	305	4.14								89.70
86.76	295	4.13								86.76
83.82	285	4.12								83.82
80.87	275	4.10								80.87
77.93	265	4.09								77.93
74.99	255	4.08								74.99
72.06	245	4.06								72.06
69.11	235	4.05								69.11
67.64				230	3.74					67.64
66.17	225	4.04								66.17
64.70				220	3.73					64.70
63.23	215	4.03				CB				63.23
61.76				210	3.72	1				61.76
60.28	205	4.01				2				60.28
58.82				200	3.71	7				58.82
57.34	195	4.00								57.34
55.88				190	3.71					55.88
54.41	185	3.98								54.41
52.94			CB	180	3.64					52.94
51.47	175	3.97	1							51.47
50.00			4							50.00
48.52	165	3.96	6	170	3.65	CB				48.52
47.06						1				47.06
45.58	155	3.94		160	3.67	2				45.58
44.12						6				44.12
42.64	145	3.93		150	3.69					42.64
41.17										41.17
39.70	135	3.92		140	3.01		140	3.08		39.70
38.81										38.81
38.52	131	3.77					132	3.09		38.52
38.24				130	3.03	CB				38.24
36.75	125	3.90				1			CB	36.75
36.46						2			1	36.46
35.28				120	3.06	5	124	3.09	0	35.28
34.11									5	34.11
33.82	115	3.89					116	3.11		33.82
32.34				110	3.10					32.34
31.76										31.76
30.88	105	3.08	CB				108	3.13		30.88
29.40			1							29.40
27.93			4	100	2.39		100	3.16		27.93
27.06	95	3.06	5			CB				27.06
26.76						1			CB	26.76
				91	2.41	2	92	2.50	1	
						4			0	
									4	

CARNEGIE BEAM SECTIONS

CARNEGIE BEAM SECTIONS—Continued

COLUMN SECTIONS

COMPARATIVE TABLE OF RADII OF GYRATION AND AREAS

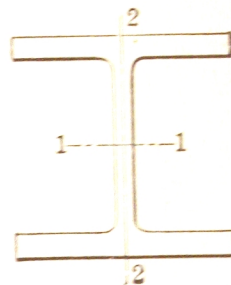
Area	14 In.			12 In.			10 In.			9 In.			8 In.			Area
	Wt.	r 2-2	No.	Wt.	r 2-2	No.	Wt.	r 2-2	No.	Wt.	r 2-2	No.	Wt.	r 2-2	No.	
26.47													90	2.17		26.47
24.99	85	3.05	CB 1										84	2.15		24.99
24.71			4													24.71
24.70			5			CB 1	84	2.48	CB 1							24.70
24.41				83	2.45	2			0							24.41
22.93						4			4				78	2.14		22.93
22.65							77	2.51								22.65
22.05	75	2.47	CB 1	75	2.51								72	2.12		22.05
21.17			4													21.17
20.59			4				70	2.55								20.59
19.99	68	2.46														19.99
19.40													66	2.11		19.40
18.53							63	2.14								18.53
17.94	61	2.44													CB 8	17.94
17.63													60	2.09	3	17.63
17.05	58	1.92							CB 1							17.05
16.47							56	2.20	0							16.47
15.87			CB 1						3				54	2.07		15.87
15.59	53	1.91	4			CB 1										15.59
14.69			3	50	1.98	2										14.69
14.41						3	49	2.27								14.41
14.12	48	1.90														14.12
14.11										48	2.29					14.11
14.10													48	2.06		14.10
13.23				45	1.97											13.23
12.65										43	2.28	CB 9				12.65
12.35	42	1.56					42	1.73				3				12.35
12.34													42	2.04		12.34
11.76			CB 1	40	1.95											11.76
11.47	39	1.56	4													11.47
11.17			2							38	2.26					11.17
10.59				36	1.55											10.59
10.58	36	1.55					36	1.80	CB 1				36	2.02		10.58
10.29									0							10.29
9.71	33	1.54							2	35	1.61					9.71
9.40				32	1.54	CB 1										9.40
9.11						2	31	1.89					32	1.60	CB 9	9.11
9.10															2	9.10
8.81													31	2.01		8.81
8.53													30	1.63		8.53
8.22				28	1.53					29	1.59				CB 8	8.22
7.93															2	7.93
7.06													27	1.62		7.06
													24	1.61		

CARNEGIE STEEL COMPANY

CARNEGIE BEAM SECTIONS—Continued



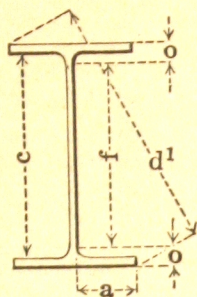
ELEMENTS
OF
SECTIONS
DECIMAL



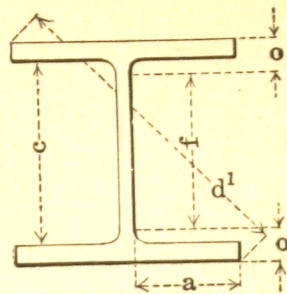
Section Index and Nominal Depth	Weight per Foot	Area of Section	Depth of Section	Flange Width	Web Thick- ness	Axis 1-1			Axis 2-2		
						I	S	r	I	S	r
	Lbs.	In. ²	In.	In.	In.	In. ⁴	In. ³	In.	In. ⁴	In. ³	In.
CB 302 30"	240	70.58	30.781	14.218	.888	11356.0737.9	12.69	766.9	107.9	3.30	
	220	64.70	30.522	14.146	.816	10320.4676.3	12.63	693.9	98.1	3.28	
	200	58.82	30.263	14.073	.743	9305.7615.0	12.58	622.7	88.5	3.25	
	180	52.93	30.000	14.000	.670	8301.4553.4	12.52	552.7	79.0	3.23	
CB 301 30"	135	39.70	30.298	10.591	.621	5907.3389.9	12.20	204.8	38.7	2.27	
	125	36.75	30.148	10.546	.576	5441.7361.0	12.17	187.4	35.5	2.26	
	115	33.81	30.000	10.500	.530	4985.3332.4	12.14	170.6	32.5	2.25	
CB 272 27"	190	55.87	27.598	14.176	.756	7376.9534.6	11.49	610.7	86.2	3.31	
	175	51.47	27.400	14.118	.698	6746.8492.5	11.45	556.6	78.9	3.29	
	160	47.04	27.200	14.059	.639	6121.8450.1	11.41	503.2	71.6	3.27	
	145	42.64	27.000	14.000	.580	5508.7408.1	11.37	451.0	64.4	3.25	
CB 271 27"	112	32.94	27.340	9.855	.566	4007.6293.2	11.03	148.0	30.0	2.12	
	101	29.70	27.166	9.799	.510	3595.7264.7	11.00	131.7	26.9	2.11	
	91	26.76	27.000	9.750	.461	3217.0238.3	10.97	116.9	24.0	2.09	
CB 244 24"	160	47.06	24.664	14.123	.670	5065.7410.8	10.38	526.0	74.5	3.34	
	150	44.10	24.526	14.082	.629	4720.5384.9	10.35	489.3	69.5	3.33	
	140	41.16	24.388	14.041	.588	4380.4359.2	10.32	453.1	64.5	3.32	
	130	38.23	24.250	14.000	.547	4045.1333.6	10.29	417.5	59.6	3.31	
CB 243 24"	120	35.29	24.310	12.089	.539	3669.7301.9	10.20	277.8	46.0	2.81	
	110	32.34	24.156	12.044	.494	3343.5276.8	10.17	252.2	41.9	2.79	
	100	29.41	24.000	12.000	.450	3020.5251.7	10.14	226.9	37.8	2.78	
CB 242 24"	94	27.64	24.308	9.844	.499	2734.9225.0	9.95	130.2	26.4	2.17	
	85	24.99	24.154	9.797	.452	2457.2203.5	9.92	116.2	23.7	2.16	
	76	22.35	24.000	9.750	.405	2184.4182.0	9.89	102.6	21.0	2.14	
CB 241 24"	70	20.58	24.000	8.500	.400	1953.8162.8	9.74	68.0	16.0	1.82	
CB 213 21"	120	35.28	21.248	13.070	.535	2890.9272.1	9.05	349.7	53.5	3.15	
	112	32.93	21.126	13.034	.499	2683.7254.1	9.03	324.3	49.8	3.14	
	104	30.57	21.000	13.000	.465	2475.3235.7	9.00	298.7	45.9	3.13	
CB 212 21"	92	27.05	21.240	9.064	.502	2086.4196.5	8.78	116.3	25.7	2.07	
	86	25.29	21.120	9.032	.470	1939.3183.6	8.76	107.7	23.8	2.06	
	80	23.53	21.000	9.000	.438	1794.4170.9	8.73	99.2	22.0	2.05	
CB 211 21"	70	20.59	21.248	8.073	.433	1542.9145.2	8.66	64.3	15.9	1.77	
	64	18.82	21.126	8.036	.396	1403.3132.9	8.64	58.2	14.5	1.76	
	58	17.05	21.000	8.000	.360	1263.2120.3	8.61	52.0	13.0	1.75	
	60	17.64	21.034	8.015	.375	1304.9124.1	8.60	53.7	13.4	1.75	

CARNEGIE BEAM SECTIONS

CARNEGIE BEAM SECTIONS—Continued



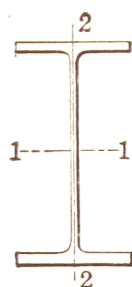
DIMENSIONS
OF
SECTIONS
FRACTIONAL



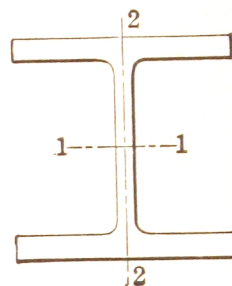
Weight per Foot	Depth of Section	Flange		Web		Distance					Section Index and Nominal Depth
		Width	Thick- ness	Thick- ness	½ Thick- ness +	a	c	f	o	d¹	
Lbs.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	
240	30¾	14¾ ¹⁶	1¾ ¹⁶	7⁄8	1½	6 ¹¹ / ₁₆	27 ⁹ / ₁₆	25½	2½	33 ¹⁵ / ₁₆	CB 302 30"
220	30½	14½	1¾ ¹⁶	13 ¹ / ₁₆	7 ¹ / ₁₆	6 ¹¹ / ₁₆	27 ⁹ / ₁₆	25½	2½	33 ⁵ / ₈	
200	30¼	14¼ ¹⁶	1½ ¹⁶	¾	¾	6 ¹¹ / ₁₆	27 ⁹ / ₁₆	25½	2¾	33 ³ / ₈	
180	30	14	1¾ ¹⁶	11 ¹ / ₁₆	¾	6 ¹¹ / ₁₆	27 ⁹ / ₁₆	25½	2¼	33 ¹ / ₈	
135	30 ⁵ / ₁₆	10 ⁵ / ₈	1	5⁄8	5 ¹ / ₁₆	5	28 ³ / ₁₆	26¾	1¾	32 ¹ / ₈	CB 301 30"
125	30 ¹ / ₈	10 ⁹ / ₁₆	1 ⁵ / ₁₆	9 ¹ / ₁₆	5 ¹ / ₁₆	5	28 ³ / ₁₆	26¾	1 ¹¹ / ₁₆	31 ¹⁵ / ₁₆	
115	30	10½	7⁄8	1½	5 ¹ / ₁₆	5	28 ³ / ₁₆	26¾	1 ⁵ / ₈	31 ¹³ / ₁₆	
190	27 ⁵ / ₈	14¾ ¹⁶	1¼	¾	7 ¹ / ₁₆	6¾	25	23¼	2¾ ¹⁶	31 ¹ / ₁₆	CB 272 27"
175	27¾	14½	1¾ ¹⁶	11 ¹ / ₁₆	¾	6¾	25	23¼	2¼ ¹⁶	30 ¹³ / ₁₆	
160	27¾ ¹⁶	14¼ ¹⁶	1¼ ¹⁶	5⁄8	¾	6¾	25	23¼	2	30 ⁵ / ₈	
145	27	14	1	9 ¹ / ₁₆	5 ¹ / ₁₆	6¾	25	23¼	1¾	30 ⁷ / ₁₆	
112	27¾	9¾	1 ⁵ / ₁₆	9 ¹ / ₁₆	5 ¹ / ₁₆	4 ¹ / ₁₆	25 ⁷ / ₁₆	24½	1 ⁵ / ₈	29 ¹ / ₁₆	CB 271 27"
101	27¾ ¹⁶	9 ¹³ / ₁₆	1¾ ¹⁶	1½	5 ¹ / ₁₆	4 ¹ / ₁₆	25 ⁷ / ₁₆	24½	1½	28 ⁷ / ₈	
91	27	9¾	¾	7 ¹ / ₁₆	¼	4 ¹ / ₁₆	25 ⁷ / ₁₆	24½	1 ⁷ / ₁₆	28 ¹ / ₁₆	
160	24 ¹¹ / ₁₆	14½	1½	11 ¹ / ₁₆	¾	6¾	22¾	20¾	1 ¹⁵ / ₁₆	28 ⁷ / ₁₆	CB 244 24"
150	24½	14¼ ¹⁶	1¼ ¹⁶	5⁄8	¾	6¾	22¾	20¾	1 ⁷ / ₈	28 ⁵ / ₁₆	
140	24¾	14¼ ¹⁶	1	9 ¹ / ₁₆	5 ¹ / ₁₆	6¾	22¾	20¾	1 ¹³ / ₁₆	28 ¹ / ₈	
130	24¼	14	1 ⁵ / ₁₆	9 ¹ / ₁₆	5 ¹ / ₁₆	6¾	22¾	20¾	1¾	28	
120	24 ⁵ / ₁₆	12¼ ¹⁶	1 ⁵ / ₁₆	9 ¹ / ₁₆	5 ¹ / ₁₆	5 ¹³ / ₁₆	22¾	20¾	1¾	27 ³ / ₁₆	CB 243 24"
110	24½	12¼ ¹⁶	7⁄8	1½	¼	5 ¹³ / ₁₆	22¾	20¾	1 ¹¹ / ₁₆	27	
100	24	12	1¾ ¹⁶	7 ¹ / ₁₆	¼	5 ¹³ / ₁₆	22¾	20¾	1 ⁵ / ₈	26 ⁷ / ₈	
94	24 ⁵ / ₁₆	9¾	1¾ ¹⁶	1½	¼	4 ¹ / ₁₆	22 ⁵ / ₈	21¾	1 ⁷ / ₁₆	26¼	CB 242 24"
85	24¾	9 ¹³ / ₁₆	¾	7 ¹ / ₁₆	¼	4 ¹ / ₁₆	22 ⁵ / ₈	21¾	1 ³ / ₈	26 ¹ / ₁₆	
76	24	9¾	1 ¹ / ₁₆	¾	¼	4 ¹ / ₁₆	22 ⁵ / ₈	21¾	1 ⁵ / ₁₆	25 ¹⁵ / ₁₆	
70	24	8½	1 ¹ / ₁₆	¾	¼	4 ¹ / ₁₆	22 ⁵ / ₈	21¾	1 ⁵ / ₁₆	25½	CB 241 24"
120	21¼	13¼ ¹⁶	1 ⁵ / ₁₆	9 ¹ / ₁₆	5 ¹ / ₁₆	6 ⁵ / ₁₆	19 ⁵ / ₁₆	17 ⁷ / ₈	1 ¹¹ / ₁₆	24 ¹⁵ / ₁₆	CB 213 21"
112	21 ¹ / ₈	13¼ ¹⁶	7⁄8	1½	¼	6 ⁵ / ₁₆	19 ⁵ / ₁₆	17 ⁷ / ₈	1 ⁵ / ₈	24 ¹³ / ₁₆	
104	21	13	1¾ ¹⁶	7 ¹ / ₁₆	¼	6 ⁵ / ₁₆	19 ⁵ / ₁₆	17 ⁷ / ₈	1 ⁹ / ₁₆	24 ¹ / ₁₆	
92	21¼	9¼ ¹⁶	1 ⁵ / ₁₆	1½	¼	4 ⁵ / ₁₆	19 ⁵ / ₁₆	17 ⁷ / ₈	1 ¹¹ / ₁₆	23 ¹ / ₈	CB 212 21"
86	21 ¹ / ₈	9¼ ¹⁶	7⁄8	1½	¼	4 ⁵ / ₁₆	19 ⁵ / ₁₆	17 ⁷ / ₈	1 ⁵ / ₈	23	
80	21	9	1¾ ¹⁶	7 ¹ / ₁₆	¼	4 ⁵ / ₁₆	19 ⁵ / ₁₆	17 ⁷ / ₈	1 ⁹ / ₁₆	22 ⁷ / ₈	
70	21¼	8¼ ¹⁶	¾	7 ¹ / ₁₆	¼	3 ¹³ / ₁₆	19¾	18 ⁵ / ₈	1 ⁵ / ₁₆	22¾	CB 211 21"
64	21 ¹ / ₈	8¼ ¹⁶	1 ¹ / ₁₆	¾	¼	3 ¹³ / ₁₆	19¾	18 ⁵ / ₈	1 ¹ / ₄	22 ⁵ / ₈	
58	21	8	5⁄8	¾	¾ ¹ / ₁₆	3 ¹³ / ₁₆	19¾	18 ⁵ / ₈	1 ³ / ₁₆	22½	
60	21	8	5⁄8	¾	¾ ¹ / ₁₆	3 ¹³ / ₁₆	19¾	18 ⁵ / ₈	1 ³ / ₁₆	22½	

CARNEGIE STEEL COMPANY

CARNEGIE BEAM SECTIONS—Continued



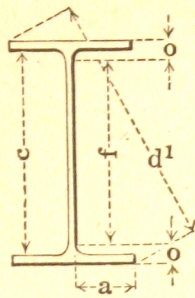
ELEMENTS
OF
SECTIONS
DECIMAL



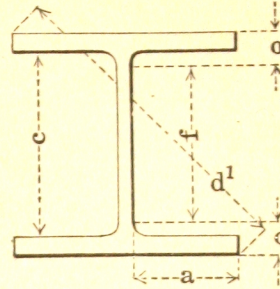
Section Index and Nominal Depth	Weight per Foot	Area of Section	Depth of Section	Flange Width	Web Thick- ness	Axis 1-1			Axis 2-2		
						I	S	r	I	S	r
						In. ⁴	In. ³	In.	In. ⁴	In. ³	In.
CB 183 18"	100	29.40	18.238	12.069	.498	1783.4	195.6	7.79	253.4	42.0	2.94
	93	27.35	18.120	12.034	.463	1648.4	181.9	7.76	234.0	38.9	2.93
	86	25.29	18.000	12.000	.429	1514.1	168.2	7.74	214.7	35.8	2.91
CB 182 18"	78	22.94	18.242	8.565	.471	1318.8	144.6	7.58	90.9	21.2	1.99
	72	21.17	18.110	8.530	.436	1208.1	133.4	7.55	82.9	19.4	1.98
	67	19.69	18.000	8.500	.406	1117.1	124.1	7.53	76.4	18.0	1.97
CB 181 18"	58	17.05	18.252	7.573	.393	960.8	105.3	7.51	49.0	13.0	1.70
	52	15.30	18.114	7.534	.354	855.1	94.4	7.48	43.3	11.5	1.68
	47	13.82	18.000	7.500	.320	768.6	85.4	7.46	38.7	10.3	1.67
CB 165 16"	51	15.00	18.024	7.555	.375	810.0	89.9	7.35	40.5	10.7	1.34
	115	33.82	16.236	14.068	.532	1665.6	205.2	7.02	426.2	60.6	3.55
	107	31.46	16.110	14.032	.496	1537.2	190.8	6.99	393.9	56.1	3.54
CB 164 16"	100	29.41	16.000	14.000	.464	1426.8	178.3	6.97	366.0	52.3	3.53
	90	26.46	16.240	12.076	.495	1275.5	157.1	6.94	230.0	38.1	2.95
	83	24.41	16.120	12.039	.458	1167.7	144.9	6.92	210.4	35.0	2.94
CB 163 16"	76	22.34	16.000	12.000	.419	1061.3	132.7	6.89	191.1	31.8	2.92
	68	20.00	16.226	8.563	.438	923.7	113.9	6.80	81.3	19.0	2.02
	63	18.52	16.114	8.531	.406	849.9	105.5	6.77	74.6	17.5	2.01
CB 162 16"	58	17.06	16.000	8.500	.375	776.6	97.1	6.75	68.0	16.0	2.00
	50	14.70	16.254	7.072	.362	666.0	81.9	6.73	38.2	10.8	1.61
	45	13.23	16.128	7.036	.326	595.0	73.8	6.71	34.0	9.7	1.60
CB 161 16"	40	11.75	16.000	7.000	.290	524.6	65.6	6.68	29.8	8.5	1.59
	43	12.65	15.934	7.085	.375	523.8	65.7	6.44	28.9	8.2	1.51
	38	11.17	16.012	6.024	.314	475.1	59.3	6.52	19.2	6.4	1.31
CB 161 16"	35	10.29	15.930	6.000	.290	435.5	54.7	6.50	17.5	5.8	1.30

CARNEGIE BEAM SECTIONS

CARNEGIE BEAM SECTIONS—Continued



DIMENSIONS
OF
SECTIONS
FRACTIONAL



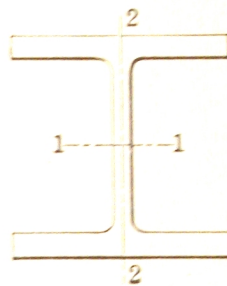
Weight per Foot	Depth of Section	Flange		Web		Distance					Section Index and Nominal Depth
		Width	Thick- ness	Thick- ness	½ Thick- ness +	a	c	f	o	d¹	
Lbs.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	
100	18¼	12½	7⁄8	½	¼	5½	16½	15½	19½	21¾	CB 183 18"
93	18½	12½	13⁄16	7⁄16	¼	5½	16½	15½	19½	21¾	
86	18	12	¾	7⁄16	¼	5½	16½	15½	19½	21¾	
78	18¼	8¾	7⁄8	½	¼	4½	16½	15½	19½	20½	CB 182 18"
72	18½	8½	13⁄16	7⁄16	¼	4½	16½	15½	19½	20	
67	18	8½	¾	¾	¼	4½	16½	15½	19½	19½	
58	18¼	7¾	11⁄16	¾	¼	3½	16¾	15¾	13½	19¾	CB 181 18"
52	18½	7¾	5⁄8	¾	¾	3½	16¾	15¾	13½	19¾	
47	18	7½	9⁄16	5⁄16	¾	3½	16¾	15¾	13½	19½	
51	18	7¾	9⁄16	¾	¾	3½	16¾	15¾	13½	19½	
115	16¼	14½	15⁄16	9⁄16	5⁄16	6½	14¾	13	15½	21½	CB 165 16"
107	16½	14	7⁄8	½	¼	6½	14¾	13	19½	21¾	
100	16	14	13⁄16	7⁄16	¼	6½	14¾	13	19½	21¼	
90	16¼	12½	13⁄16	½	¼	5½	14¾	13¾	17½	20¼	CB 164 16"
83	16½	12½	¾	7⁄16	¼	5½	14¾	13¾	13¾	20½	
76	16	12	11⁄16	7⁄16	¼	5½	14¾	13¾	15½	20	
68	16¼	8¾	¾	7⁄16	¼	4½	14¾	13¾	17½	18¾	CB 163 16"
63	16½	8½	¾	¾	¼	4½	14¾	13¾	13¾	18¼	
58	16	8½	11⁄16	¾	¾	4½	14¾	13¾	15½	18½	
50	16¼	7½	5⁄8	¾	¾	3¾	14½	14	11½	17¾	CB 162 16"
45	16½	7½	9⁄16	5⁄16	¾	3¾	14½	14	11½	17¾	
40	16	7	½	5⁄16	¾	3¾	14½	14	1	17½	
43	15½	7½	½	¾	¾	3¾	14½	14	1	17½	
38	16	6	½	5⁄16	¾	2¾	14½	14	1	17½	CB 161 16"
35	15½	6	½	5⁄16	¾	2¾	14½	14	15½	17½	

CARNEGIE STEEL COMPANY

CARNEGIE BEAM SECTIONS—Continued



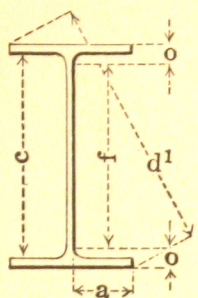
ELEMENTS
OF
SECTIONS
DECIMAL



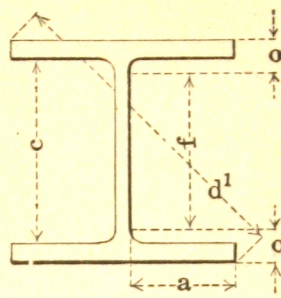
Section Index and Nominal Depth	Weight per Foot	Area of Section	Depth of Section	Flange Width	Web Thick- ness	Axis 1-1			Axis 2-2		
						I	S	r	I	S	r
	Lbs.	In. ²	In.	In.	In.	In. ⁴	In. ³	In.	In. ⁴	In. ³	In.
	305	89.70	16.890	16.000	1.406	4121.5	488.0	6.78	1539.1	192.4	4.14
	295	86.76	16.752	15.956	1.362	3948.1	471.4	6.75	1479.4	185.4	4.13
	285	83.82	16.614	15.912	1.318	3778.1	454.8	6.71	1420.7	178.6	4.12
	275	80.87	16.472	15.870	1.276	3607.8	438.1	6.68	1362.0	171.6	4.10
	265	77.93	16.332	15.826	1.232	3442.4	421.6	6.65	1304.2	164.8	4.09
	255	74.99	16.192	15.781	1.187	3280.0	405.1	6.61	1247.1	158.0	4.08
	245	72.06	16.050	15.738	1.144	3119.6	388.7	6.58	1190.6	151.3	4.06
	235	69.11	15.908	15.693	1.099	2961.9	372.4	6.55	1134.5	144.6	4.05
	225	66.17	15.764	15.650	1.056	2806.2	356.0	6.51	1079.1	137.9	4.04
	215	63.23	15.622	15.604	1.010	2654.7	339.9	6.48	1024.5	131.3	4.03
CB 146	205	60.28	15.478	15.559	.965	2505.0	323.7	6.45	970.3	124.7	4.01
14"	195	57.34	15.334	15.513	.919	2358.2	307.6	6.41	916.8	118.2	4.00
	185	54.41	15.188	15.469	.875	2213.5	291.5	6.38	863.9	111.7	3.98
	175	51.47	15.042	15.424	.830	2071.7	275.5	6.34	811.6	105.2	3.97
	165	48.52	14.896	15.377	.783	1932.6	259.5	6.31	759.9	98.8	3.96
	155	45.58	14.750	15.330	.736	1796.8	243.6	6.28	709.0	92.5	3.94
	145	42.64	14.602	15.284	.690	1662.7	227.7	6.24	658.5	86.2	3.93
	135	39.70	14.452	15.239	.645	1530.4	211.8	6.21	608.4	79.9	3.92
	125	36.75	14.304	15.191	.597	1402.1	196.0	6.18	559.4	73.7	3.90
	115	33.82	14.154	15.145	.551	1275.9	180.3	6.14	510.9	67.5	3.89
	131	38.52	14.162	15.468	.874	1358.4	191.8	5.94	547.3	70.8	3.77
CB 145	105	30.88	14.370	12.101	.536	1169.6	162.8	6.15	292.6	48.4	3.08
14"	95	27.93	14.186	12.050	.485	1044.0	147.2	6.11	262.0	43.5	3.06
	85	24.99	14.000	12.000	.435	921.3	131.6	6.07	232.0	38.7	3.05
CB 144	75	22.05	14.382	10.086	.468	823.5	114.5	6.11	134.5	26.7	2.47
14"	68	19.99	14.238	10.043	.425	738.8	103.8	6.08	120.6	24.0	2.46
	61	17.94	14.094	10.000	.382	656.2	93.1	6.05	107.1	21.4	2.44
CB 143	58	17.05	14.242	8.070	.413	609.4	85.6	5.98	62.8	15.6	1.92
14"	53	15.59	14.122	8.035	.378	552.5	78.2	5.95	56.8	14.1	1.91
	48	14.12	14.000	8.000	.343	496.0	70.9	5.93	50.8	12.7	1.90
CB 142	42	12.35	14.240	6.822	.342	431.5	60.6	5.91	30.2	8.8	1.56
14"	39	11.47	14.160	6.798	.318	398.3	56.3	5.89	27.7	8.2	1.56
	36	10.58	14.080	6.774	.294	365.6	51.9	5.88	25.4	7.5	1.55
	33	9.71	14.000	6.750	.270	333.4	47.6	5.86	23.0	6.8	1.54
	38	11.18	14.000	6.855	.375	357.5	51.1	5.66	24.2	7.1	1.47
CB 141	30	8.82	13.964	6.000	.270	292.0	41.8	5.75	15.5	5.2	1.33
14"											

CARNEGIE BEAM SECTIONS

CARNEGIE BEAM SECTIONS—Continued



DIMENSIONS
OF
SECTIONS
FRACTIONAL



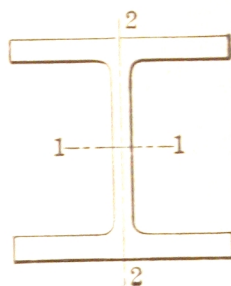
Weight per Foot	Depth of Section	Flange		Web		Distance					Section Index and Nominal Depth
		Width	Thick- ness	Thick- ness	½ Thick- ness +	a	c	f	o	d¹	
Lbs.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	
305	16 ⁷ / ₈	16	2 ¹ / ₄	1 ³ / ₈	3 ⁴ / ₈	7 ⁵ / ₁₆	12 ³ / ₈	11	21 ⁵ / ₁₆	23 ⁵ / ₁₆	CB 146 14"
295	16 ³ / ₄	15 ¹⁵ / ₁₆	2 ³ / ₁₆	1 ³ / ₈	1 ¹ / ₁₆	7 ⁵ / ₁₆	12 ³ / ₈	11	21 ⁵ / ₁₆	23 ¹ / ₈	
285	16 ⁵ / ₈	15 ¹⁵ / ₁₆	2 ¹ / ₈	1 ⁵ / ₁₆	1 ¹ / ₁₆	7 ⁵ / ₁₆	12 ³ / ₈	11	21 ⁵ / ₁₆	23	
275	16 ¹ / ₂	15 ⁷ / ₈	2 ¹ / ₁₆	1 ¹ / ₄	1 ¹ / ₁₆	7 ⁵ / ₁₆	12 ³ / ₈	11	21 ⁵ / ₁₆	22 ⁷ / ₈	
265	16 ⁵ / ₁₆	15 ¹³ / ₁₆	2	1 ¹ / ₄	5 ⁸ / ₈	7 ⁵ / ₁₆	12 ³ / ₈	11	21 ⁵ / ₁₆	22 ³ / ₄	
255	16 ³ / ₁₆	15 ³ / ₄	1 ⁷ / ₈	1 ³ / ₁₆	5 ⁸ / ₈	7 ⁵ / ₁₆	12 ³ / ₈	11	21 ⁵ / ₁₆	22 ⁵ / ₈	
245	16 ¹ / ₁₆	15 ³ / ₄	1 ¹³ / ₁₆	1 ¹ / ₈	5 ⁸ / ₈	7 ⁵ / ₁₆	12 ³ / ₈	11	21 ⁵ / ₁₆	22 ¹ / ₂	
235	15 ¹⁵ / ₁₆	15 ¹¹ / ₁₆	1 ³ / ₄	1 ¹ / ₈	9 ¹ / ₁₆	7 ⁵ / ₁₆	12 ³ / ₈	11	21 ⁵ / ₁₆	22 ³ / ₈	
225	15 ³ / ₄	15 ⁵ / ₈	1 ¹¹ / ₁₆	1 ¹ / ₁₆	9 ¹ / ₁₆	7 ⁵ / ₁₆	12 ³ / ₈	11	21 ⁵ / ₁₆	22 ¹ / ₄	
215	15 ⁵ / ₈	15 ⁵ / ₈	1 ⁵ / ₈	1	9 ¹ / ₁₆	7 ⁵ / ₁₆	12 ³ / ₈	11	21 ⁵ / ₁₆	22 ¹ / ₈	
205	15 ¹ / ₂	15 ⁹ / ₁₆	1 ⁹ / ₁₆	1 ⁵ / ₁₆	1 ² / ₂	7 ⁵ / ₁₆	12 ³ / ₈	11	21 ⁵ / ₁₆	21 ⁵ / ₁₆	CB 145 14"
195	15 ⁵ / ₁₆	15 ¹ / ₂	1 ¹ / ₂	1 ⁵ / ₁₆	1 ² / ₂	7 ⁵ / ₁₆	12 ³ / ₈	11	21 ⁵ / ₁₆	21 ¹³ / ₁₆	
185	15 ³ / ₁₆	15 ¹ / ₂	1 ³ / ₈	7 ⁸ / ₈	7 ¹ / ₁₆	7 ⁵ / ₁₆	12 ³ / ₈	11	21 ⁵ / ₁₆	21 ¹¹ / ₁₆	
175	15 ¹ / ₁₆	15 ⁷ / ₁₆	1 ⁵ / ₁₆	1 ³ / ₁₆	7 ¹ / ₁₆	7 ⁵ / ₁₆	12 ³ / ₈	11	21 ⁵ / ₁₆	21 ⁹ / ₁₆	
165	14 ⁷ / ₈	15 ³ / ₈	1 ¹ / ₄	1 ³ / ₁₆	7 ¹ / ₁₆	7 ⁵ / ₁₆	12 ³ / ₈	11	21 ⁵ / ₁₆	21 ⁷ / ₁₆	
155	14 ³ / ₄	15 ⁵ / ₁₆	1 ³ / ₁₆	3 ⁴ / ₈	3 ⁸ / ₈	7 ⁵ / ₁₆	12 ³ / ₈	11	21 ⁵ / ₁₆	21 ⁵ / ₁₆	
145	14 ⁵ / ₈	15 ⁵ / ₁₆	1 ¹ / ₈	1 ¹ / ₁₆	3 ⁸ / ₈	7 ⁵ / ₁₆	12 ³ / ₈	11	21 ⁵ / ₁₆	21 ¹ / ₈	
135	14 ⁷ / ₁₆	15 ¹ / ₄	1	5 ⁸ / ₈	3 ⁸ / ₈	7 ⁵ / ₁₆	12 ³ / ₈	11	21 ⁵ / ₁₆	21	
125	14 ⁵ / ₁₆	15 ³ / ₁₆	1 ⁵ / ₁₆	5 ⁸ / ₈	5 ¹ / ₁₆	7 ⁵ / ₁₆	12 ³ / ₈	11	21 ⁵ / ₁₆	20 ⁷ / ₈	
115	14 ¹ / ₈	15 ¹ / ₈	7 ⁸ / ₈	9 ¹ / ₁₆	5 ¹ / ₁₆	7 ⁵ / ₁₆	12 ³ / ₈	11	21 ⁵ / ₁₆	20 ³ / ₄	
131	14 ³ / ₁₆	15 ⁷ / ₁₆	7 ⁸ / ₈	7 ⁸ / ₈	7 ¹ / ₁₆	7 ⁵ / ₁₆	12 ³ / ₈	11	21 ⁵ / ₁₆	21	CB 144 14"
105	14 ³ / ₈	12 ¹ / ₈	1	9 ¹ / ₁₆	5 ¹ / ₁₆	5 ¹³ / ₁₆	12 ³ / ₈	11	11 ¹ / ₁₆	18 ¹³ / ₁₆	
95	14 ³ / ₁₆	12 ¹ / ₁₆	7 ⁸ / ₈	1 ² / ₂	1 ⁴ / ₄	5 ¹³ / ₁₆	12 ³ / ₈	11	11 ¹ / ₁₆	18 ⁵ / ₈	
85	14	12	1 ³ / ₁₆	7 ¹ / ₁₆	1 ⁴ / ₄	5 ¹³ / ₁₆	12 ³ / ₈	11	11 ¹ / ₁₆	18 ⁷ / ₁₆	
75	14 ³ / ₈	10 ¹ / ₁₆	1 ³ / ₁₆	7 ¹ / ₁₆	1 ⁴ / ₄	4 ¹³ / ₁₆	12 ³ / ₄	11 ⁵ / ₈	13 ⁸ / ₈	17 ⁹ / ₁₆	
68	14 ¹ / ₄	10 ¹ / ₁₆	1 ¹ / ₁₆	7 ¹ / ₁₆	1 ⁴ / ₄	4 ¹³ / ₁₆	12 ³ / ₄	11 ⁵ / ₈	13 ⁸ / ₈	17 ⁷ / ₁₆	
61	14 ¹ / ₈	10	5 ⁸ / ₈	3 ⁸ / ₈	1 ⁴ / ₄	4 ¹³ / ₁₆	12 ³ / ₄	11 ⁵ / ₈	13 ⁸ / ₈	17 ⁵ / ₁₆	
58	14 ¹ / ₄	8 ¹ / ₁₆	1 ¹ / ₁₆	7 ¹ / ₁₆	1 ⁴ / ₄	3 ⁷ / ₈	12 ³ / ₄	11 ⁵ / ₈	13 ⁸ / ₈	16 ³ / ₈	CB 143 14"
53	14 ¹ / ₈	8 ¹ / ₁₆	5 ⁸ / ₈	3 ⁸ / ₈	1 ⁴ / ₄	3 ⁷ / ₈	12 ³ / ₄	11 ⁵ / ₈	13 ⁸ / ₈	16 ¹ / ₄	
48	14	8	5 ⁸ / ₈	5 ¹ / ₁₆	3 ¹ / ₁₆	3 ⁷ / ₈	12 ³ / ₄	11 ⁵ / ₈	13 ⁸ / ₈	16 ¹ / ₈	
42	14 ¹ / ₄	6 ¹³ / ₁₆	9 ¹ / ₁₆	5 ¹ / ₁₆	3 ¹ / ₁₆	3 ¹ / ₄	13 ¹ / ₁₆	12 ¹ / ₄	1	15 ¹³ / ₁₆	
39	14 ³ / ₁₆	6 ¹³ / ₁₆	1 ² / ₂	5 ¹ / ₁₆	3 ¹ / ₁₆	3 ¹ / ₄	13 ¹ / ₁₆	12 ¹ / ₄	1	15 ¹¹ / ₁₆	
36	14 ¹ / ₁₆	6 ³ / ₄	1 ² / ₂	5 ¹ / ₁₆	3 ¹ / ₁₆	3 ¹ / ₄	13 ¹ / ₁₆	12 ¹ / ₄	1 ⁵ / ₁₆	15 ⁵ / ₈	
33	14	6 ³ / ₄	7 ¹ / ₁₆	1 ⁴ / ₄	3 ¹ / ₁₆	3 ¹ / ₄	13 ¹ / ₁₆	12 ¹ / ₄	7 ⁸ / ₈	15 ⁹ / ₁₆	
38	14	6 ⁷ / ₈	7 ¹ / ₁₆	3 ⁸ / ₈	3 ¹ / ₁₆	3 ¹ / ₄	13 ¹ / ₁₆	12 ¹ / ₄	7 ⁸ / ₈	15 ⁵ / ₈	
30	13 ¹⁵ / ₁₆	6	7 ¹ / ₁₆	1 ⁴ / ₄	3 ¹ / ₁₆	2 ⁷ / ₈	13 ¹ / ₁₆	12 ¹ / ₄	7 ⁸ / ₈	15 ³ / ₁₆	
											CB 141 14"

CARNEGIE STEEL COMPANY

CARNEGIE BEAM SECTIONS—Continued



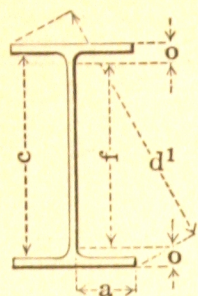
ELEMENTS
OF
SECTIONS
DECIMAL



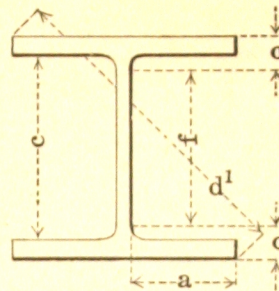
Section Index and Nominal Depth	Weight per Foot	Area of Section	Depth of Section	Flange Width	Web Thick- ness	Axis 1-1			Axis 2-2		
						I	S	r	I	S	r
						In. ⁴	In. ³	In.	In. ⁴	In. ³	In.
CB 127 12"	230	67.64	12.000	14.980	1.980	1461.9	243.7	4.65	945.5	126.2	3.74
	220	64.70	12.000	14.735	1.735	1426.6	237.8	4.70	898.2	121.9	3.73
	210	61.76	12.000	14.490	1.490	1391.3	231.9	4.75	852.9	117.7	3.72
	200	58.82	12.000	14.245	1.245	1356.1	226.0	4.80	809.5	113.7	3.71
	190	55.88	12.000	14.000	1.000	1320.8	220.1	4.86	767.8	109.7	3.71
CB 126 12"	180	52.94	12.000	14.735	1.492	1218.1	203.0	4.80	702.4	95.3	3.64
	170	50.00	12.000	14.490	1.247	1182.8	197.1	4.86	666.9	92.1	3.65
	160	47.06	12.000	14.245	1.002	1147.5	191.3	4.94	633.0	88.9	3.67
	150	44.12	12.000	14.000	.757	1112.2	185.4	5.02	600.4	85.8	3.69
CB 125 12"	140	41.18	12.000	12.736	1.376	934.8	155.8	4.76	372.4	58.5	3.01
	130	38.24	12.000	12.491	1.131	899.5	149.9	4.85	350.5	56.1	3.03
	120	35.28	12.000	12.245	.885	864.1	144.0	4.95	329.6	53.8	3.06
	110	32.34	12.000	12.000	.640	828.8	138.1	5.06	309.9	51.6	3.10
CB 124 12"	100	29.41	12.000	10.613	1.121	659.0	109.8	4.73	167.5	31.6	2.39
	91	26.76	12.000	10.392	.900	627.2	104.5	4.84	155.9	30.0	2.41
	83	24.41	12.000	10.196	.704	598.9	99.8	4.95	147.0	28.8	2.45
	75	22.05	12.000	10.000	.508	570.7	95.1	5.09	138.5	27.7	2.51
CB 123 12"	50	14.69	12.258	8.071	.361	400.5	65.4	5.22	57.5	14.2	1.98
	45	13.23	12.130	8.036	.326	356.9	58.8	5.19	51.2	12.7	1.97
	40	11.76	12.000	8.000	.290	313.7	52.3	5.17	44.9	11.2	1.95
CB 122 12"	36	10.59	12.236	6.568	.308	280.1	45.8	5.14	25.4	7.7	1.55
	32	9.40	12.118	6.534	.274	246.3	40.7	5.12	22.3	6.8	1.54
	28	8.22	12.000	6.500	.240	213.4	35.6	5.10	19.2	5.9	1.53
	34	9.99	12.022	6.635	.375	238.1	39.6	4.88	21.0	6.3	1.45
CB 121 12"	25	7.34	11.924	6.000	.240	183.0	30.7	4.99	13.8	4.6	1.37

CARNEGIE BEAM SECTIONS

CARNEGIE BEAM SECTIONS—Continued



DIMENSIONS
OF
SECTIONS
FRACTIONAL



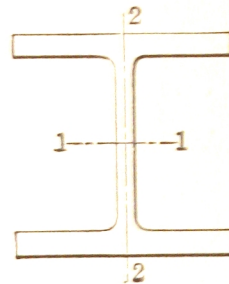
Weight per Foot	Depth of Section	Flange		Web		Distance					Section Index and Nominal Depth
		Width	Thick- ness	Thick- ness	½ Thick- ness +	a	c	f	o	d¹	
Lbs.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	
230	12	15	1 11/16	2	1	6 1/2	8 5/8	7 1/4	2 3/8	19 3/16	CB 127 12"
220	12	14 3/4	1 11/16	1 3/4	7/8	6 1/2	8 5/8	7 1/4	2 3/8	19	
210	12	14 1/2	1 11/16	1 1/2	3/4	6 1/2	8 5/8	7 1/4	2 3/8	18 13/16	
200	12	14 1/4	1 11/16	1 1/4	5/8	6 1/2	8 5/8	7 1/4	2 3/8	18 5/8	
190	12	14	1 11/16	1	1/2	6 1/2	8 5/8	7 1/4	2 3/8	18 7/16	
180	12	14 3/4	1 5/16	1 1/2	3/4	6 5/8	9 3/8	8	2	19	CB 126 12"
170	12	14 1/2	1 5/16	1 1/4	5/8	6 5/8	9 3/8	8	2	18 13/16	
160	12	14 1/4	1 5/16	1	9/16	6 5/8	9 3/8	8	2	18 5/8	
150	12	14	1 5/16	3/4	7/16	6 5/8	9 3/8	8	2	18 7/16	
140	12	12 3/4	1 1/16	1 3/8	3/4	5 11/16	9 13/16	8 5/8	1 11/16	17 1/2	CB 125 12"
130	12	12 1/2	1 1/16	1 1/8	5/8	5 11/16	9 13/16	8 5/8	1 11/16	17 3/8	
120	12	12 1/4	1 1/16	7/8	1/2	5 11/16	9 13/16	8 5/8	1 11/16	17 1/8	
110	12	12	1 1/16	5/8	3/8	5 11/16	9 13/16	8 5/8	1 11/16	17	
100	12	10 5/8	1 3/16	1 1/8	9/16	4 3/4	10 5/16	9 1/4	1 3/8	16	CB 124 12"
91	12	10 3/8	1 3/16	7/8	1/2	4 3/4	10 5/16	9 1/4	1 3/8	15 7/8	
83	12	10 3/16	1 3/16	11/16	3/8	4 3/4	10 5/16	9 1/4	1 3/8	15 3/4	
75	12	10	1 3/16	1/2	5/16	4 3/4	10 5/16	9 1/4	1 3/8	15 5/8	
50	12 1/4	8 1/16	5/8	3/8	3/16	3 7/8	10 15/16	9 7/8	1 3/16	14 11/16	CB 123 12"
45	12 1/8	8 1/16	9/16	5/16	3/16	3 7/8	10 15/16	9 7/8	1 1/8	14 9/16	
40	12	8	1/2	5/16	3/16	3 7/8	10 15/16	9 7/8	1 1/16	14 7/16	
36	12 1/4	6 9/16	9/16	5/16	3/16	3 3/16	11 1/8	10 3/8	1 5/16	13 7/8	CB 122 12"
32	12 1/8	6 9/16	1/2	1/4	3/16	3 3/16	11 1/8	10 3/8	7/8	13 13/16	
28	12	6 1/2	7/16	1/4	1/8	3 3/16	11 1/8	10 3/8	13/16	13 11/16	
34	12	6 5/8	7/16	3/8	3/16	3 3/16	11 1/8	10 3/8	1 3/16	13 3/4	CB 121 12"
25	11 15/16	6	3/8	1/4	1/8	2 15/16	11 1/8	10 3/8	1 3/16	13 3/8	

CARNEGIE STEEL COMPANY

CARNEGIE BEAM SECTIONS—Continued



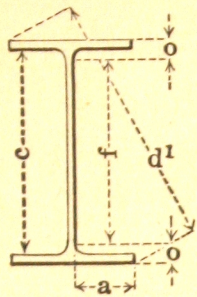
ELEMENTS OF SECTIONS DECIMAL



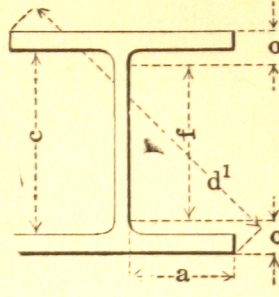
Section Index and Nominal Depth	Weight per Foot	Area of Section	Depth of Section	Flange Width	Web Thick- ness	Axis 1-1			Axis 2-2		
						I	S	r	I	S	r
						In. ⁴	In. ³	In.	In. ⁴	In. ³	In.
GB 105 10"	140	41.17	10.000	13.177	1.777	623.2	124.6	3.89	391.4	59.4	3.08
	132	38.81	10.000	12.941	1.541	603.5	120.7	3.94	369.6	57.1	3.09
	124	36.46	10.000	12.706	1.306	583.9	116.8	4.00	349.0	54.9	3.09
	116	34.11	10.000	12.471	1.071	564.3	112.9	4.07	329.4	52.8	3.11
	108	31.76	10.000	12.236	.836	544.8	109.0	4.14	310.7	50.8	3.13
	100	29.40	10.000	12.000	.600	525.1	105.0	4.23	292.8	48.8	3.16
CB 104 10"	92	27.06	10.000	10.647	1.162	423.2	84.6	3.96	163.1	30.6	2.50
	84	24.70	10.000	10.411	.926	403.6	80.7	4.04	152.0	29.2	2.48
	77	22.65	10.000	10.206	.721	386.5	77.3	4.13	142.9	28.0	2.51
	70	20.59	10.000	10.000	.515	369.3	73.9	4.24	134.3	26.9	2.55
CB 103 10"	63	18.53	10.000	9.412	.787	300.4	60.1	4.03	85.2	18.1	2.14
	56	16.47	10.000	9.206	.581	283.2	56.6	4.15	79.5	17.3	2.20
	49	14.41	10.000	9.000	.375	266.0	53.2	4.30	74.2	16.5	2.27
CB 102 10"	42	12.35	10.000	8.324	.644	190.4	38.1	3.93	36.8	8.9	1.73
	36	10.58	10.000	8.147	.467	175.6	35.1	4.07	34.4	8.5	1.80
	31	9.11	10.000	8.000	.320	163.4	32.7	4.23	32.5	8.1	1.89
CB 101 10"	30	8.82	10.228	6.068	.298	163.2	31.9	4.30	18.5	6.1	1.45
	26	7.64	10.098	6.029	.259	139.5	27.6	4.27	15.7	5.2	1.43
	23	6.76	10.000	6.000	.230	122.2	24.4	4.25	13.7	4.6	1.43
	21	6.17	9.902	6.000	.230	107.6	21.7	4.18	12.0	4.0	1.39
CB 93 9"	48	14.11	9.242	9.082	.398	221.1	47.8	3.96	73.8	16.3	2.29
	43	12.65	9.122	9.041	.357	195.5	42.9	3.93	65.4	14.5	2.28
	38	11.17	9.000	9.000	.316	170.4	37.9	3.91	57.1	12.7	2.26
CB 92 9"	35	10.29	9.192	6.556	.335	155.4	33.8	3.89	26.6	8.1	1.61
	32	9.40	9.096	6.528	.307	140.5	30.9	3.87	24.0	7.4	1.60
	29	8.53	9.000	6.500	.279	126.0	28.0	3.84	21.5	6.6	1.59

CARNEGIE BEAM SECTIONS

CARNEGIE BEAM SECTIONS—Continued



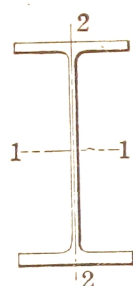
DIMENSIONS
OF
SECTIONS
FRACTIONAL



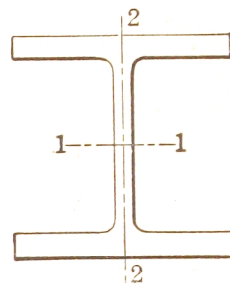
Weight per Foot	Depth of Section	Flange		Web		Distance					Section Index and Nominal Depth
		Width	Thick- ness	Thick- ness	½ Thick- ness +	a	c	f	o	d¹	
Lbs.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	
140	10	13 ³ / ₁₆	1	1 ³ / ₄	1 ⁵ / ₁₆	5 ³ / ₄	7 ¹⁵ / ₁₆	6 ³ / ₄	1 ⁵ / ₈	16 ⁹ / ₁₆	CB 105 10"
132	10	12 ¹⁵ / ₁₆	1	1 ⁹ / ₁₆	1 ³ / ₁₆	5 ³ / ₄	7 ¹⁵ / ₁₆	6 ³ / ₄	1 ⁵ / ₈	16 ³ / ₈	
124	10	12 ¹¹ / ₁₆	1	1 ⁵ / ₁₆	1 ¹ / ₁₆	5 ³ / ₄	7 ¹⁵ / ₁₆	6 ³ / ₄	1 ⁵ / ₈	16 ³ / ₁₆	
116	10	12 ¹ / ₂	1	1 ¹ / ₁₆	9 ¹ / ₁₆	5 ³ / ₄	7 ¹⁵ / ₁₆	6 ³ / ₄	1 ⁵ / ₈	16	
108	10	12 ¹ / ₄	1	1 ³ / ₁₆	7 ¹ / ₁₆	5 ³ / ₄	7 ¹⁵ / ₁₆	6 ³ / ₄	1 ⁵ / ₈	15 ¹³ / ₁₆	
100	10	12	1	5 ⁸ / ₁₆	5 ¹ / ₁₆	5 ³ / ₄	7 ¹⁵ / ₁₆	6 ³ / ₄	1 ⁵ / ₈	15 ⁵ / ₈	
92	10	10 ⁵ / ₈	1 ³ / ₁₆	1 ³ / ₁₆	5 ⁸ / ₁₆	4 ³ / ₄	8 ³ / ₈	7 ³ / ₈	1 ⁵ / ₁₆	14 ⁵ / ₈	CB 104 10"
84	10	10 ⁷ / ₁₆	1 ³ / ₁₆	1 ⁵ / ₁₆	1 ² / ₁₆	4 ³ / ₄	8 ³ / ₈	7 ³ / ₈	1 ⁵ / ₁₆	14 ⁷ / ₁₆	
77	10	10 ³ / ₁₆	1 ³ / ₁₆	3 ⁴ / ₁₆	3 ⁸ / ₁₆	4 ³ / ₄	8 ³ / ₈	7 ³ / ₈	1 ⁵ / ₁₆	14 ⁵ / ₁₆	
70	10	10	1 ³ / ₁₆	1 ² / ₁₆	5 ¹ / ₁₆	4 ³ / ₄	8 ³ / ₈	7 ³ / ₈	1 ⁵ / ₁₆	14 ³ / ₁₆	
63	10	9 ⁷ / ₁₆	5 ⁸ / ₁₆	1 ³ / ₁₆	7 ¹ / ₁₆	4 ⁵ / ₁₆	8 ³ / ₄	7 ⁷ / ₈	1 ¹ / ₁₆	13 ³ / ₄	CB 103 10"
56	10	9 ³ / ₁₆	5 ⁸ / ₁₆	9 ¹ / ₁₆	5 ¹ / ₁₆	4 ⁵ / ₁₆	8 ³ / ₄	7 ⁷ / ₈	1 ¹ / ₁₆	13 ⁵ / ₈	
49	10	9	5 ⁸ / ₁₆	3 ⁸ / ₁₆	3 ¹ / ₁₆	4 ⁵ / ₁₆	8 ³ / ₄	7 ⁷ / ₈	1 ¹ / ₁₆	13 ¹ / ₂	
42	10	8 ⁵ / ₁₆	3 ⁸ / ₁₆	5 ⁸ / ₁₆	3 ⁸ / ₁₆	3 ⁷ / ₈	9 ³ / ₁₆	8 ⁵ / ₈	1 ¹ / ₁₆	13 ¹ / ₁₆	CB 102 10"
36	10	8 ¹ / ₈	3 ⁸ / ₁₆	7 ¹ / ₁₆	1 ⁴ / ₁₆	3 ⁷ / ₈	9 ³ / ₁₆	8 ⁵ / ₈	1 ¹ / ₁₆	12 ¹⁵ / ₁₆	
31	10	8	3 ⁸ / ₁₆	5 ¹ / ₁₆	3 ¹ / ₁₆	3 ⁷ / ₈	9 ³ / ₁₆	8 ⁵ / ₈	1 ¹ / ₁₆	12 ¹³ / ₁₆	
30	10 ¹ / ₄	6 ¹ / ₁₆	1 ² / ₁₆	5 ¹ / ₁₆	3 ¹ / ₁₆	2 ¹⁵ / ₁₆	9 ³ / ₁₆	8 ⁵ / ₈	1 ³ / ₁₆	11 ¹⁵ / ₁₆	CB 101 10"
26	10 ¹ / ₈	6	7 ¹ / ₁₆	1 ⁴ / ₁₆	3 ¹ / ₁₆	2 ¹⁵ / ₁₆	9 ³ / ₁₆	8 ⁵ / ₈	3 ⁴ / ₁₆	11 ¹³ / ₁₆	
23	10	6	3 ⁸ / ₁₆	1 ⁴ / ₁₆	1 ⁸ / ₁₆	2 ¹⁵ / ₁₆	9 ³ / ₁₆	8 ⁵ / ₈	1 ¹ / ₁₆	11 ¹¹ / ₁₆	
21	9 ⁷ / ₈	6	5 ¹ / ₁₆	1 ⁴ / ₁₆	1 ⁸ / ₁₆	2 ¹⁵ / ₁₆	9 ³ / ₁₆	8 ⁵ / ₈	5 ⁸ / ₁₆	11 ⁵ / ₈	CB 93 9"
48	9 ¹ / ₄	9 ¹ / ₁₆	9 ¹ / ₁₆	3 ⁸ / ₁₆	1 ⁴ / ₁₆	4 ³ / ₈	8	7	1 ¹ / ₈	13	
43	9 ¹ / ₈	9 ¹ / ₁₆	1 ² / ₁₆	3 ⁸ / ₁₆	3 ¹ / ₁₆	4 ³ / ₈	8	7	1 ¹ / ₁₆	12 ⁷ / ₈	
38	9	9	1 ² / ₁₆	5 ¹ / ₁₆	3 ¹ / ₁₆	4 ³ / ₈	8	7	1	12 ³ / ₄	
35	9 ³ / ₁₆	6 ⁹ / ₁₆	9 ¹ / ₁₆	5 ¹ / ₁₆	3 ¹ / ₁₆	3 ¹ / ₈	8	7	1 ¹ / ₈	11 ⁵ / ₁₆	CB 92 9"
32	9 ¹ / ₈	6 ¹ / ₂	1 ² / ₁₆	5 ¹ / ₁₆	3 ¹ / ₁₆	3 ¹ / ₈	8	7	1 ¹ / ₁₆	11 ³ / ₁₆	
29	9	6 ¹ / ₂	1 ² / ₁₆	1 ⁴ / ₁₆	3 ¹ / ₁₆	3 ¹ / ₈	8	7	1	11 ¹ / ₈	

CARNEGIE STEEL COMPANY

CARNEGIE BEAM SECTIONS—Continued



ELEMENTS
OF
SECTIONS
DECIMAL



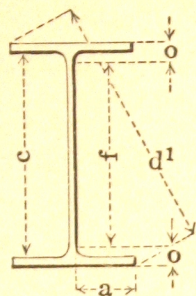
Section Index and Nominal Depth	Weight per Foot	Area of Section	Depth of Section	Flange Width	Web Thick- ness	Axis 1-1			Axis 2-2		
						I	S	r	I	S	r
						In. ⁴	In. ³	In.	In. ⁴	In. ³	In.
CB 83 8"	90	26.47	9.606	8.520	.810	391.2	81.4	3.84	124.4	29.2	2.17
	84	24.71	9.456	8.469	.759	358.6	75.8	3.81	114.5	27.0	2.15
	78	22.93	9.302	8.418	.708	326.5	70.2	3.77	104.7	24.9	2.14
	72	21.17	9.150	8.366	.656	295.9	64.7	3.74	95.3	22.8	2.12
	66	19.40	8.994	8.314	.604	265.9	59.1	3.70	86.1	20.7	2.11
	60	17.63	8.838	8.261	.551	237.1	53.7	3.67	77.1	18.7	2.09
	54	15.87	8.680	8.208	.498	209.2	48.2	3.63	68.3	16.6	2.07
	48	14.10	8.520	8.155	.445	182.2	42.8	3.59	59.7	14.6	2.06
	42	12.34	8.360	8.100	.390	156.2	37.4	3.56	51.4	12.7	2.04
	36	10.58	8.198	8.046	.336	131.3	32.0	3.52	43.4	10.8	2.02
CB 82 8"	31	9.10	8.060	8.000	.290	110.9	27.5	3.49	36.7	9.2	2.01
	30	8.81	8.196	6.559	.298	107.8	26.3	3.50	23.4	7.1	1.63
	27	7.93	8.098	6.529	.268	95.9	23.7	3.48	20.8	6.4	1.62
	24	7.06	8.000	6.500	.239	84.3	21.1	3.46	18.3	5.6	1.61

STANDARD MILL SECTIONS

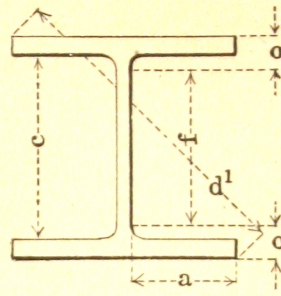
Section Index and Nominal Depth	Weight per Foot	Area of Section	Depth of Section	Flange Width	Web Thick- ness	Axis 1-1			Axis 2-2		
						I	S	r	I	S	r
						In. ⁴	In. ³	In.	In. ⁴	In. ³	In.
B 40 9"	25	7.34	9.000	5.380	.380	95.5	21.2	3.61	8.8	3.3	1.09
	21	6.17	9.000	5.250	.250	87.6	19.5	3.77	8.1	3.1	1.14
B 39 8"	21	6.17	8.000	5.110	.360	63.4	15.9	3.21	6.6	2.6	1.03
	18	5.29	8.000	5.000	.250	58.7	14.7	3.33	6.1	2.4	1.07
H 4 8"	37.7	11.00	8.000	8.125	.500	120.8	30.2	3.31	36.9	9.1	1.83
	34.3	10.00	8.000	8.000	.375	115.5	28.9	3.40	35.1	8.8	1.87
	32.6	9.50	8.000	7.938	.313	112.8	28.2	3.45	34.2	8.6	1.90
H 3A 6"	27.5	8.08	6.000	6.063	.438	49.3	16.4	2.47	16.0	5.3	1.41
	25.0	7.33	6.000	5.938	.313	47.0	15.7	2.53	14.9	5.0	1.43
H 3 6"	22.5	6.61	6.000	6.063	.375	41.0	13.7	2.49	12.2	4.0	1.36
	20.0	5.86	6.000	5.938	.250	38.8	12.9	2.57	11.4	3.8	1.39
H 2 5"	18.9	5.47	5.000	5.000	.313	23.8	9.5	2.08	7.8	3.1	1.20
H 1 4"	13.8	3.99	4.000	4.000	.313	10.7	5.3	1.64	3.6	1.8	0.95

CARNEGIE BEAM SECTIONS

CARNEGIE BEAM SECTIONS—Concluded



DIMENSIONS
OF
SECTIONS
FRACTIONAL



Weight per Foot	Depth of Section	Flange		Web		Distance					Section Index and Nominal Depth
		Width	Thick- ness	Thick- ness	½ Thick- ness +	a	c	f	o	d¹	
Lbs.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	
90	9 ⁵ / ₈	8 ¹ / ₂	1 ³ / ₁₆	1 ³ / ₁₆	7 ¹ / ₈	3 ⁷ / ₈	7 ³ / ₁₆	6 ¹ / ₄	11 ¹ / ₁₆	12 ⁷ / ₈	CB 83 8"
84	9 ⁷ / ₁₆	8 ¹ / ₂	1 ¹ / ₈	3 ⁴ / ₈	7 ¹ / ₈	3 ⁷ / ₈	7 ³ / ₁₆	6 ¹ / ₄	1 ⁵ / ₈	12 ³ / ₄	
78	9 ⁵ / ₁₆	8 ⁷ / ₁₆	1 ¹ / ₁₆	1 ¹ / ₁₆	3 ⁸ / ₈	3 ⁷ / ₈	7 ³ / ₁₆	6 ¹ / ₄	1 ⁹ / ₁₆	12 ⁹ / ₁₆	
72	9 ¹ / ₈	8 ³ / ₈	1	1 ¹ / ₁₆	3 ⁸ / ₈	3 ⁷ / ₈	7 ³ / ₁₆	6 ¹ / ₄	1 ⁷ / ₁₆	12 ⁷ / ₁₆	
66	9	8 ⁵ / ₁₆	7 ⁸ / ₈	5 ⁸ / ₈	5 ¹ / ₁₆	3 ⁷ / ₈	7 ³ / ₁₆	6 ¹ / ₄	1 ³ / ₈	12 ¹ / ₄	
60	8 ¹³ / ₁₆	8 ¹ / ₄	1 ³ / ₁₆	9 ¹ / ₁₆	5 ¹ / ₁₆	3 ⁷ / ₈	7 ³ / ₁₆	6 ¹ / ₄	1 ⁵ / ₁₆	12 ¹ / ₈	
54	8 ¹¹ / ₁₆	8 ³ / ₁₆	3 ⁴ / ₈	1 ² / ₄	1 ⁴ / ₄	3 ⁷ / ₈	7 ³ / ₁₆	6 ¹ / ₄	1 ¹ / ₄	11 ¹⁵ / ₁₆	
48	8 ¹ / ₂	8 ¹ / ₈	1 ¹ / ₁₆	7 ¹ / ₁₆	1 ⁴ / ₄	3 ⁷ / ₈	7 ³ / ₁₆	6 ¹ / ₄	1 ¹ / ₈	11 ¹³ / ₁₆	
42	8 ³ / ₈	8 ¹ / ₈	9 ¹ / ₁₆	3 ⁸ / ₈	1 ⁴ / ₄	3 ⁷ / ₈	7 ³ / ₁₆	6 ¹ / ₄	1 ¹ / ₁₆	11 ¹¹ / ₁₆	
36	8 ³ / ₁₆	8 ¹ / ₁₆	1 ² / ₂	5 ¹ / ₁₆	3 ¹ / ₁₆	3 ⁷ / ₈	7 ³ / ₁₆	6 ¹ / ₄	1	11 ¹ / ₂	
31	8 ¹ / ₁₆	8	7 ¹ / ₁₆	5 ¹ / ₁₆	3 ¹ / ₁₆	3 ⁷ / ₈	7 ³ / ₁₆	6 ¹ / ₄	1 ⁵ / ₁₆	11 ³ / ₈	CB 82 8"
30	8 ³ / ₁₆	6 ⁹ / ₁₆	1 ² / ₂	5 ¹ / ₁₆	3 ¹ / ₁₆	3 ³ / ₁₆	7 ³ / ₁₆	6 ¹ / ₄	1	10 ¹ / ₂	
27	8 ¹ / ₈	6 ¹ / ₂	7 ¹ / ₁₆	1 ⁴ / ₄	3 ¹ / ₁₆	3 ³ / ₁₆	7 ³ / ₁₆	6 ¹ / ₄	1 ⁵ / ₁₆	10 ⁷ / ₁₆	
24	8	6 ¹ / ₂	3 ⁸ / ₈	1 ⁴ / ₄	1 ⁸ / ₈	3 ³ / ₁₆	7 ³ / ₁₆	6 ¹ / ₄	7 ⁸ / ₈	10 ⁵ / ₁₆	

STANDARD MILL SECTIONS

Weight per Foot	Depth of Section	Flange		Web		Distance					Section Index and Nominal Depth
		Width	Thick- ness	Thick- ness	½ Thick- ness +	a	c	f	o	d¹	
Lbs.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	
25	9	5 ³ / ₈	3 ⁸ / ₈	3 ⁸ / ₈	1 ⁴ / ₄	2 ¹ / ₂	...	7 ¹ / ₂	3 ⁴ / ₄	10 ¹ / ₂	B 40
21	9	5 ¹ / ₄	3 ⁸ / ₈	1 ⁴ / ₄	1 ⁸ / ₈	2 ¹ / ₂	...	7 ¹ / ₂	3 ⁴ / ₄	10 ⁷ / ₁₆	9"
21	8	5 ¹ / ₈	5 ¹ / ₁₆	3 ⁸ / ₈	3 ¹ / ₁₆	2 ³ / ₈	...	6 ⁵ / ₈	1 ¹ / ₁₆	9 ¹ / ₂	B 39
18	8	5	5 ¹ / ₁₆	1 ⁴ / ₄	1 ⁸ / ₈	2 ³ / ₈	...	6 ⁵ / ₈	1 ¹ / ₁₆	9 ⁷ / ₁₆	8"
37.7	8	8 ¹ / ₈	7 ¹ / ₁₆	1 ² / ₂	1 ⁴ / ₄	3 ¹³ / ₁₆	...	6 ¹ / ₄	7 ⁸ / ₈	11 ⁷ / ₁₆	H 4
34.3	8	8	7 ¹ / ₁₆	3 ⁸ / ₈	3 ¹ / ₁₆	3 ¹³ / ₁₆	...	6 ¹ / ₄	7 ⁸ / ₈	11 ⁵ / ₁₆	8"
32.6	8	7 ¹⁵ / ₁₆	7 ¹ / ₁₆	5 ¹ / ₁₆	3 ¹ / ₁₆	3 ¹³ / ₁₆	...	6 ¹ / ₄	7 ⁸ / ₈	11 ¹ / ₄	
27.5	6	6 ¹ / ₁₆	1 ² / ₂	7 ¹ / ₁₆	1 ⁴ / ₄	2 ¹³ / ₁₆	...	4 ¹ / ₄	7 ⁸ / ₈	8 ⁹ / ₁₆	H 3A
25.0	6	5 ¹⁵ / ₁₆	1 ² / ₂	5 ¹ / ₁₆	3 ¹ / ₁₆	2 ¹³ / ₁₆	...	4 ¹ / ₄	7 ⁸ / ₈	8 ¹ / ₂	6"
22.5	6	6 ¹ / ₁₆	3 ⁸ / ₈	3 ⁸ / ₈	3 ¹ / ₁₆	2 ⁷ / ₈	...	4 ⁷ / ₁₆	3 ⁴ / ₄	8 ⁹ / ₁₆	H 3
20.0	6	5 ¹⁵ / ₁₆	3 ⁸ / ₈	1 ⁴ / ₄	1 ⁸ / ₈	2 ⁷ / ₈	...	4 ⁷ / ₁₆	3 ⁴ / ₄	8 ¹ / ₂	6"
18.9	5	5	7 ¹ / ₁₆	5 ¹ / ₁₆	3 ¹ / ₁₆	2 ³ / ₈	...	3 ³ / ₈	1 ³ / ₁₆	7 ¹ / ₁₆	H 2
13.8	4	4	3 ⁸ / ₈	5 ¹ / ₁₆	3 ¹ / ₁₆	1 ⁷ / ₈	...	2 ¹ / ₂	3 ⁴ / ₄	5 ¹¹ / ₁₆	H 1

Dimensions for Flange Thickness of Standard Mill Sections are the averages between dimensions of toe and root of Flanges.



CARNEGIE STEEL COMPANY

OFFICES

GENERAL OFFICES:

Pittsburgh, Carnegie Building, 434 Fifth Avenue.

DISTRICT OFFICES:

Birmingham, Brown-Marx Building, 2000 First Avenue, North,

Boston, 120 Franklin Street,

Buffalo, The Marine Trust Co. Building, 233-239 Main Street,

Chicago, 208 South La Salle Street,

Cincinnati, Union Trust Building, Fourth and Walnut Streets,

Cleveland, Rockefeller Building, 704 Superior Avenue, N. W.,

Denver, First National Bank Building, 17th and Stout Streets,

Detroit, 2130 Buhl Building, 535 Griswold Street,

New Orleans, Maison Blanche, 921 Canal Street,

New York, Empire Building, 71 Broadway,

Philadelphia, Widener Building, Juniper and Chestnut Streets,

Pittsburgh, Carnegie Building, 434 Fifth Avenue,

St. Louis, 506 Olive Street,

St. Paul, 1308 Merchants National Bank Building, 4th & Robert Sts.

EXPORT REPRESENTATIVES:

UNITED STATES STEEL PRODUCTS CO.,

New York, Hudson Terminal, 30 Church Street.

PACIFIC COAST REPRESENTATIVES:

UNITED STATES STEEL PRODUCTS CO., PACIFIC COAST DEPT.

Los Angeles, 2087 East Slauson Avenue,

Portland, Selling Building, Sixth and Alder Streets,

San Francisco, Rialto Building, 116 New Montgomery Street,

Seattle, Fourth Avenue South and Connecticut Street.